

HOA VAN LE  
PRIMARY EXAMINER

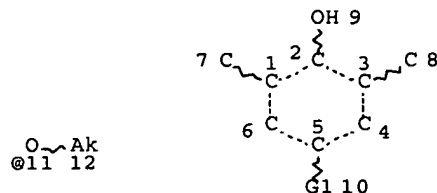
Noted 01/12/09

10/562,361

HOA VAN LE  
PRIMARY EXAMINER

=> d que 150

L2 5 SEA FILE=REGISTRY ABB=ON PLU=ON (108-95-2/BI OR 2203-14-7  
/BI OR 317804-55-0/BI OR 54845-41-9/BI OR 56272-52-7/BI)  
L11 SCR 1918  
L13 STR



VAR G1=AK/CB/X/11

NODE ATTRIBUTES:

CONNECT IS E2 RC AT 7  
CONNECT IS E2 RC AT 8  
DEFAULT MLEVEL IS ATOM  
DEFAULT ECLEVEL IS LIMITED

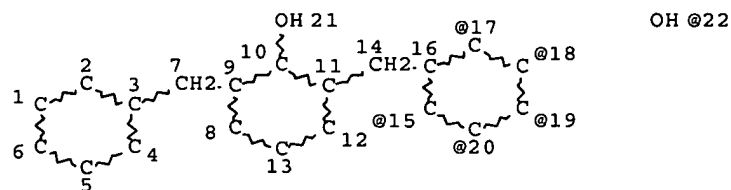
GRAPH ATTRIBUTES:

RSPEC I

NUMBER OF NODES IS 12

STEREO ATTRIBUTES: NONE

L15 SCR 1992  
L17 3232 SEA FILE=REGISTRY SSS FUL L13 NOT (L11 OR L15)  
L18 3 SEA FILE=REGISTRY ABB=ON PLU=ON L17 AND L2  
L19 2 SEA FILE=REGISTRY ABB=ON PLU=ON L2 NOT L18  
L20 1 SEA FILE=REGISTRY ABB=ON PLU=ON L19 NOT MAN/CI  
L21 STR



VPA 22-17/18/19/20/15 U

NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM  
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED  
NUMBER OF NODES IS 22

STEREO ATTRIBUTES: NONE

L24 1044 SEA FILE=REGISTRY SUB=L17 SSS FUL L21  
L25 424 SEA FILE=REGISTRY ABB=ON PLU=ON L24 AND 3/NR  
L28 100 SEA FILE=REGISTRY ABB=ON PLU=ON L25 AND 4-HYDROXY?/CNS

10/562,361

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L29      324 SEA FILE=REGISTRY ABB=ON  PLU=ON  L25 NOT L28
L30      9433 SEA FILE=REGISTRY ABB=ON  PLU=ON  108-95-2/CRN
L32      186 SEA FILE=HCAPLUS  ABB=ON  PLU=ON  L28
L33      715 SEA FILE=HCAPLUS  ABB=ON  PLU=ON  L29
L34      66  SEA FILE=HCAPLUS  ABB=ON  PLU=ON  L32 AND L33
L35      4775 SEA FILE=HCAPLUS  ABB=ON  PLU=ON  L17
L36      35397 SEA FILE=HCAPLUS  ABB=ON  PLU=ON  L30
L37      147 SEA FILE=HCAPLUS  ABB=ON  PLU=ON  L35 AND L36
L39      80249 SEA FILE=HCAPLUS  ABB=ON  PLU=ON  L20
L40      306 SEA FILE=HCAPLUS  ABB=ON  PLU=ON  L35 AND L39
L42      32  SEA FILE=HCAPLUS  ABB=ON  PLU=ON  L34 AND PHOTOG?/SC,SX
L43      35  SEA FILE=HCAPLUS  ABB=ON  PLU=ON  L37 AND PHOTOG?/SC,SX
L44      41  SEA FILE=HCAPLUS  ABB=ON  PLU=ON  L40 AND PHOTOG?/SC,SX
L45      75  SEA FILE=HCAPLUS  ABB=ON  PLU=ON  L43 OR L44
L48      30  SEA FILE=HCAPLUS  ABB=ON  PLU=ON  L45 AND (RECORD? OR
        PRINT?)
L49      2   SEA FILE=HCAPLUS  ABB=ON  PLU=ON  L42 AND L48
L50      32  SEA FILE=HCAPLUS  ABB=ON  PLU=ON  L42 OR L49

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E6 THROUGH E43 ASSIGNED

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L50 ANSWER 1 OF 32 HCAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER:      2005:467926 HCAPLUS Full-text
DOCUMENT NUMBER:       143:8512
TITLE:                 Manufacture of phenol derivatives without using
                        special equipment
INVENTOR(S):           Inatomi, Shigeki; Tagami, Noboru
PATENT ASSIGNEE(S):    Asahi Organic Chemicals Industry Co., Ltd., Japan
SOURCE:                Jpn. Kokai Tokkyo Koho, 12 pp.
                        CODEN: JKXXAF
DOCUMENT TYPE:         Patent
LANGUAGE:              Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

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PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 2005139087	A	20050602	JP 2003-375157	20031105
PRIORITY APPLN. INFO.:			JP 2003-375157	20031105

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ED Entered STN: 02 Jun 2005

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AB The derivs., useful as additives for pos.-working photoresists, intermediates
or curing agents for epoxy resins, etc., are manufactured by heterogeneous
reaction of 1 mol phenols with 0.1-0.6 mol methylolphenols in the presence of
≥5 weight parts (based on 100 weight parts of the phenols) phosphoric acid
analogs and unreactive O-containing organic solvents as auxiliary solvents.
Thus, 108 g o-cresol was treated with 100.9 g bis(4-hydroxy-3-hydroxymethyl-5-
methylphenyl)methane in the presence of 84.7 g 86% H3PO4 in 43.2 g MeOH in a
glass reactor without corrosion of an inner surface of a SUS 316 stirring
blade to give 92.6% bis[4-hydroxy-3-(4-hydroxy-3- methylbenzyl)-5-
methylphenyl]methane.

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IT 1620-68-4P, 2,6-Bis(2-hydroxy-5-methylbenzyl)-4-methylphenol
172210-41-2P

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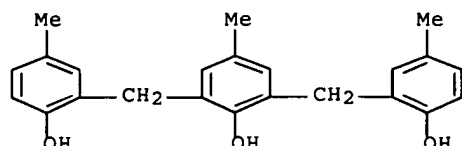
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(manufacture of phenol derivs. by heterogeneous reaction of phenols with
methylolphenols in the presence of phosphoric acid analog catalysts
and unreactive O-containing organic solvents)

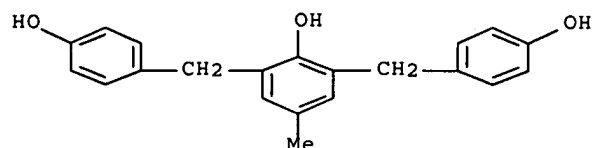
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10/562,361

RN 1620-68-4 HCAPLUS  
CN Phenol, 2,6-bis[(2-hydroxy-5-methylphenyl)methyl]-4-methyl- (CA INDEX NAME)



RN 172210-41-2 HCAPLUS  
CN Phenol, 2,6-bis[(4-hydroxyphenyl)methyl]-4-methyl- (CA INDEX NAME)



IC ICM C07C037-16  
ICS C07C039-16; G03F007-023; H01L021-027; C07B061-00  
CC 37-2 (Plastics Manufacture and Processing)  
Section cross-reference(s): 25, 35, 74  
IT 1620-68-4P, 2,6-Bis(2-hydroxy-5-methylbenzyl)-4-methylphenol  
7451-94-7P 122738-49-2P 167687-31-2P 172210-41-2P  
(manufacture of phenol derivs. by heterogeneous reaction of phenols with methylolphenols in the presence of phosphoric acid analog catalysts and unreactive O-containing organic solvents)

L50 ANSWER 2 OF 32 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2004:250337 HCAPLUS Full-text

DOCUMENT NUMBER: 140:294778

TITLE: Negative-working resist composition containing polyfunctional phenolic crosslinking agent

INVENTOR(S): Yasunami, Shoichiro; Shirakawa, Hiroshi; Adegawa, Yutaka

PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 53 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

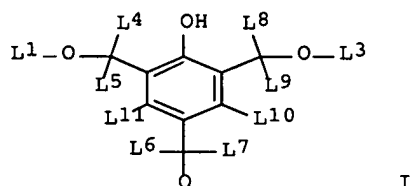
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004094025	A	20040325	JP 2002-256673	20020902
JP 4102140	B2	20080618		

PRIORITY APPLN. INFO.: JP 2002-256673 20020902

OTHER SOURCE(S): MARPAT 140:294778

ED Entered STN: 26 Mar 2004  
GI



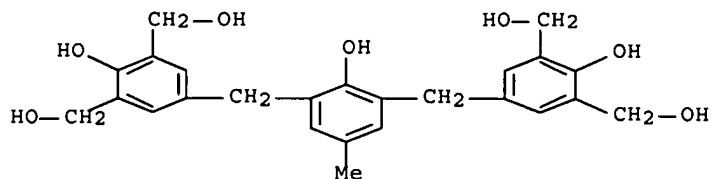
AB The neg.-working resist composition comprises (a) an alkali-soluble resin, (b) a photoacid, and (c) a crosslinking agent I (L1-3 = H, alkyl, acyl; L4-9 = H, alkyl, alkenyl; and L10-11 = H, alkyl, alkoxy, halo) capable of crosslinking the alkali-soluble resin. The alkali-soluble resin may be represented by  $[H_2C-CA\{C_6H_3R_2R_1(OH)_n\}]$  (A = H, alkyl, halo, cyano; R1,2 = H, halo, alkyl, etc.; and n = integer 1-3).

IT 197087-73-3P

(neg.-working resist composition containing polyfunctional phenolic crosslinking agent)

RN 197087-73-3 HCAPLUS

CN 1,3-Benzenedimethanol, 5,5'-[(2-hydroxy-5-methyl-1,3-phenylene)bis(methylene)]bis[2-hydroxy- (CA INDEX NAME)

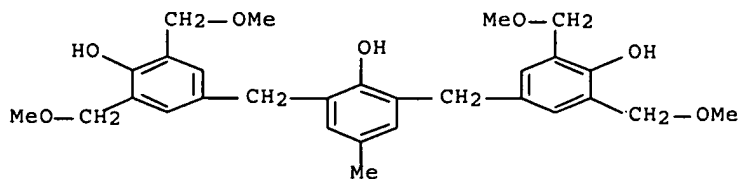


IT 197087-74-4P

(neg.-working resist composition containing polyfunctional phenolic crosslinking agent)

RN 197087-74-4 HCAPLUS

CN Phenol, 2,6-bis[[4-hydroxy-3,5-bis(methoxymethyl)phenyl]methyl]-4-methyl- (CA INDEX NAME)



IC ICM G03F007-038

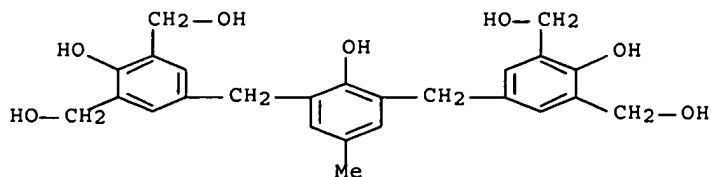
10/562,361

ICS B82B001-00; C08F012-04; C08F012-14; C08F016-14; C08F020-10;  
C08F020-54; G03F007-004; H01L021-027  
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic  
and Other Reprographic Processes)  
Section cross-reference(s): 35, 38  
IT 161679-95-4P 161679-98-7P 162846-57-3P 197087-73-3P  
(neg.-working resist composition containing polyfunctional phenolic  
crosslinking agent)  
IT 109185-69-5P 161679-94-3P 185502-11-8P 185502-14-1P  
185502-15-2P 197087-74-4P  
(neg.-working resist composition containing polyfunctional phenolic  
crosslinking agent)

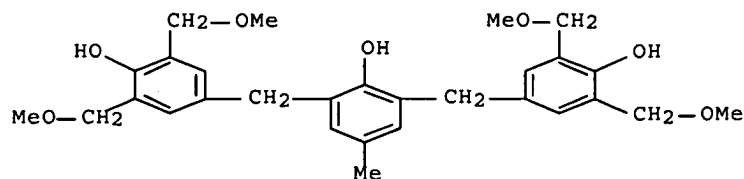
L50 ANSWER 3 OF 32 HCAPLUS COPYRIGHT 2008 ACS on STN  
ACCESSION NUMBER: 2004:154642 HCAPLUS Full-text  
DOCUMENT NUMBER: 140:207472  
TITLE: Chemically amplified negative photoresist  
compositions for electron beam, x-ray, and extreme  
UV with high resolution and sensitivity and  
suppressed development defect  
INVENTOR(S): Adegawa, Yutaka  
PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 68 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 2004062044	A	20040226	JP 2002-223205	20020731
PRIORITY APPLN. INFO.:			JP 2002-223205	20020731

ED Entered STN: 26 Feb 2004  
AB The compns. comprise (A) alkali-soluble block copolymers, which contain 1st  
blocks having a repeating unit  $\text{CH}_2\text{CR}_1\text{L}[\text{C}_6\text{H}_5\text{-m-nRm}(\text{OH})\text{n}]$  ( $\text{R}_1 = \text{H, Me}$ ;  $\text{L} =$   
single bond, divalent linking group;  $\text{R} = \text{H, alkyl, aralkyl, alkoxy,}$   
aralkyloxy;  $\text{m, n} = 1\text{-}3$ ;  $\text{m} + \text{n} = 5$ ;  $\geq 1$  of 4  $\text{R}_s \neq \text{H}$  when  $\text{n} = 1$ ) and 2nd blocks  
having no alkali-soluble groups, (B) photoacid generators sensitive to  
electron beams, X-ray, or extreme UV (EUV), and (C) acid-sensitive  
crosslinkers.  
IT 197087-73-3P 197087-74-4P  
(crosslinker; neg. photoresists for electron beam, x-ray, and  
extreme UV with high resolution and sensitivity and suppressed  
development defect)  
RN 197087-73-3 HCAPLUS  
CN 1,3-Benzenedimethanol, 5,5'-[(2-hydroxy-5-methyl-1,3-  
phenylene)bis(methylene)]bis[2-hydroxy- (CA INDEX NAME)]



RN 197087-74-4 HCAPLUS  
 CN Phenol, 2,6-bis[[4-hydroxy-3,5-bis(methoxymethyl)phenyl]methyl]-4-methyl- (CA INDEX NAME)



IC ICM G03F007-038  
 ICS C08F293-00; H01L021-027  
 CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
 IT 161679-94-3P 161679-95-4P 161679-98-7P 185502-11-8P  
 185502-14-1P 185502-15-2P 197087-73-3P  
 197087-74-4P  
 (crosslinker; neg. photoresists for electron beam, x-ray, and extreme UV with high resolution and sensitivity and suppressed development defect)

L50 ANSWER 4 OF 32 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2004:18781 HCAPLUS Full-text

DOCUMENT NUMBER: 140:84637

TITLE: Resist composition

INVENTOR(S): Takahashi, Hyou; Yasunami, Shoichiro; Mizutani, Kazuyoshi

PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan

SOURCE: U.S. Pat. Appl. Publ., 47 pp.

CODEN: USXXCO

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

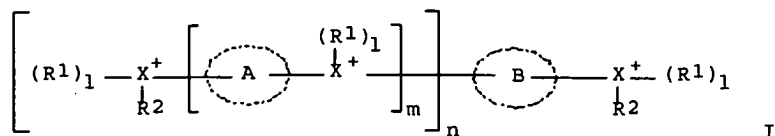
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 20040005513	A1	20040108	US 2003-606845	20030627
US 7083892	B2	20060801		
JP 2004086188	A	20040318	JP 2003-185174	20030627
US 20060147837	A1	20060706	US 2006-359424	20060223
PRIORITY APPLN. INFO.:			JP 2002-190581	A 20020628
			US 2003-606845	A3 20030627

OTHER SOURCE(S): MARPAT 140:84637

ED Entered STN: 09 Jan 2004

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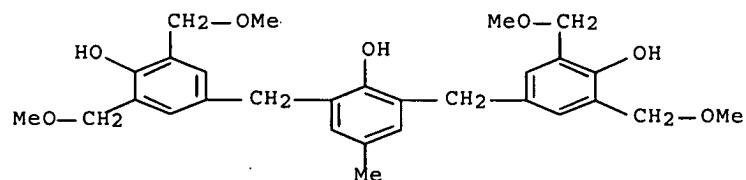
AB The resist composition of the present invention, ensuring excellent pattern profile and excellent isolation performance for use in the pattern formation by the irradiation of actinic rays or radiation, particularly, electron beam, X ray or EUV light, which comprising (A) a compound having a specific partial structure represented by I [X = sulfur atom, iodine atom; R<sup>1</sup>, R<sup>2</sup> = alkyl, aryl; A, B = hydrocarbon structure; l = 0, 1; m = 0-10; n = 1-5] and a counter ion, the compound generating an acid upon irradiation of actinic rays or radiation, (B) an alkali-soluble resin, and (C) a crosslinking agent of undergoing an addnl. reaction with the alkali-soluble resin.

IT 197087-74-4P

(crosslinking agent for resist composition showing excellent pattern profile and isolation performance)

RN 197087-74-4 HCAPLUS

CN Phenol, 2,6-bis[[4-hydroxy-3,5-bis(methoxymethyl)phenyl]methyl]-4-methyl- (CA INDEX NAME)

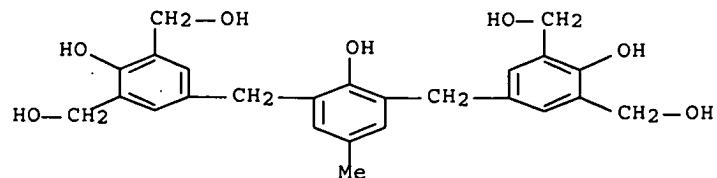


IT 197087-73-3

(preparation of crosslinking agent for resist composition showing excellent pattern profile and isolation performance)

RN 197087-73-3 HCAPLUS

CN 1,3-Benzenedimethanol, 5,5'-[(2-hydroxy-5-methyl-1,3-phenylene)bis(methylene)]bis[2-hydroxy- (CA INDEX NAME)



IC ICM G03C001-492

ICS G03C001-494; G03C001-76

INCL 430270100

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic

10/562,361

and Other Reprographic Processes)

Section cross-reference(s): 38, 76

IT 161679-94-3P 185502-14-1P 185502-15-2P 197087-74-4P  
(crosslinking agent for resist composition showing excellent pattern profile and isolation performance)

IT 50-00-0, Formalin, reactions 141-78-6, Ethyl acetate, reactions 110726-28-8, Trisp-PA 161679-95-4 161679-98-7 197087-73-3  
(preparation of crosslinking agent for resist composition showing excellent pattern profile and isolation performance)

REFERENCE COUNT: 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L50 ANSWER 5 OF 32 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2004:18087 HCAPLUS Full-text

DOCUMENT NUMBER: 140:84635

TITLE: Chemically amplified negative resists containing alkali-soluble dendrimers and suppressing development defects

INVENTOR(S): Adekawa, Yutaka

PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 67 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 2004004249	A	20040108	JP 2002-159047	20020531
PRIORITY APPLN. INFO.:			JP 2002-159047	20020531

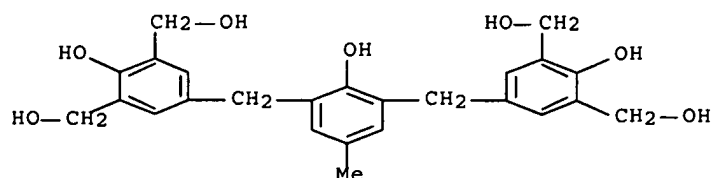
ED Entered STN: 09 Jan 2004

AB The resists, producing defectless square patterns, comprise (A) dendritic alkali-soluble resins, (B) radiation acid generators, and (C) crosslinking agents forming C-C bonds upon action of acid catalysts. The alkali-soluble resins may be [R1R'1CAC6H2-n(OR2)nR3R4Xm] [R1, R'1 = H, halo, cyano, (halo)alkyl; R2 = H, (cyclo)alkyl, aryl, aralkyl, acyl; R3, R4 = H, halo, cyano, (cyclo)alkyl, alkenyl, aralkyl, aryl; A = single bond, alk(en)ylene, cycloalkylene, arylene, etc.; m = 2, 3; n = 0, 1 (m + n ≤ 3); X = CH2, O, S].

IT 197087-73-3P 197087-74-4P  
(crosslinking agents; chemical amplified neg. resists containing alkali-soluble dendritic binder resins forming defect-free square patterns)

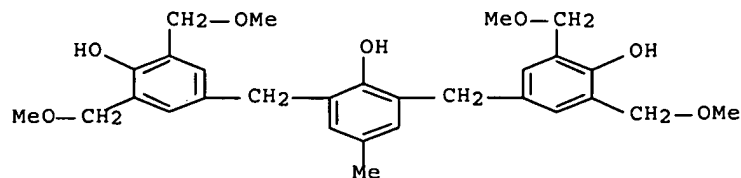
RN 197087-73-3 HCAPLUS

CN 1,3-Benzenedimethanol, 5,5'-[(2-hydroxy-5-methyl-1,3-phenylene)bis(methylene)]bis[2-hydroxy- (CA INDEX NAME)





RN 197087-74-4 HCAPLUS  
 CN Phenol, 2,6-bis[[4-hydroxy-3,5-bis(methoxymethyl)phenyl]methyl]-4-methyl- (CA INDEX NAME)

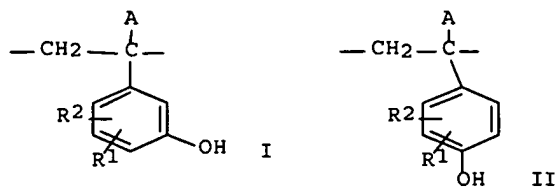


IC ICM G03F007-038  
 ICS C08G065-34; H01L021-027; H01L021-30  
 CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
 Section cross-reference(s): 25  
 IT 161679-94-3P 161679-95-4P 161679-98-7P 162846-57-3P  
 185502-11-8P 185502-14-1P 185502-15-2P 197087-73-3P  
 197087-74-4P  
 (crosslinking agents; chemical amplified neg. resists containing alkali-soluble dendritic binder resins forming defect-free square patterns)

L50 ANSWER 6 OF 32 HCAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 2003:809865 HCAPLUS Full-text  
 DOCUMENT NUMBER: 139:314465  
 TITLE: Negative-working resist composition  
 INVENTOR(S): Yasunami, Shoichiro; Adekawa, Yutaka; Shirakawa, Hiroshi  
 PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 17 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2003295438	A	20031015	JP 2002-96410	20020329
JP 3841405	B2	20061101		
US 20030203305	A1	20031030	US 2003-396583	20030326
US 6746813	B2	20040608		
PRIORITY APPLN. INFO.:			JP 2002-96410	A 20020329

ED Entered STN: 15 Oct 2003  
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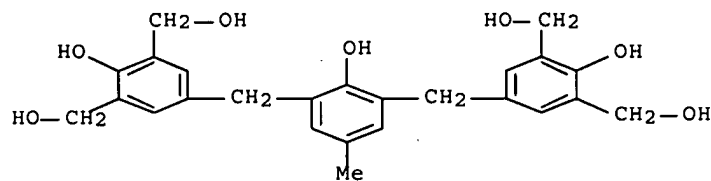
AB The neg.-working resist composition comprises (A) alkali-soluble resin I (A = H, alkyl, etc.; and R1,2 = H, halo, alkyl, etc.) and an alkali-soluble resin II, (B) a crosslinker, (C) a photoacid, and (D) a N-containing base compound. The neg.-working resist composition exhibited high sensitivity in a semiconductor device fabrication using an electron beam or an x-ray.

IT 197087-73-3 197087-74-4

(crosslinker; neg.-working resist composition from)

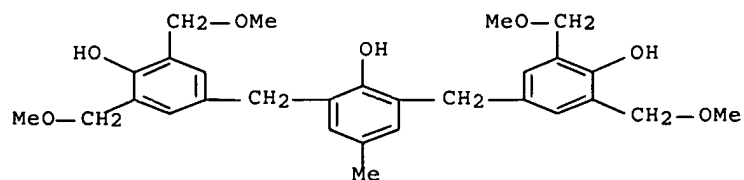
RN 197087-73-3 HCAPLUS

CN 1,3-Benzenedimethanol, 5,5'-[(2-hydroxy-5-methyl-1,3-phenylene)bis(methylene)]bis[2-hydroxy- (CA INDEX NAME)



RN 197087-74-4 HCAPLUS

CN Phenol, 2,6-bis[[4-hydroxy-3,5-bis(methoxymethyl)phenyl]methyl]-4-methyl- (CA INDEX NAME)



IC ICM G03F007-038

ICS C08F012-22; G03F007-004; H01L021-027

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 35, 38, 76

IT 161679-95-4 161679-98-7 185502-11-8 185502-14-1 185502-15-2  
197087-73-3 197087-74-4

(crosslinker; neg.-working resist composition from)

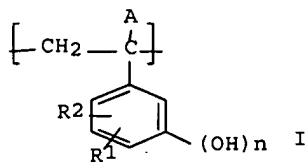
L50 ANSWER 7 OF 32 HCAPLUS COPYRIGHT 2008 ACS on STN

10/562,361

ACCESSION NUMBER: 2003:806135 HCAPLUS Full-text  
DOCUMENT NUMBER: 139:314459  
TITLE: Negative-working resist composition containing  
quaternary ammonium salt  
INVENTOR(S): Yasunami, Shoichiro  
PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 27 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2003295439	A	20031015	JP 2002-96411	20020329
JP 3856306	B2	20061213		
PRIORITY APPLN. INFO.:			JP 2002-96411	20020329

OTHER SOURCE(S): MARPAT 139:314459  
ED Entered STN: 15 Oct 2003  
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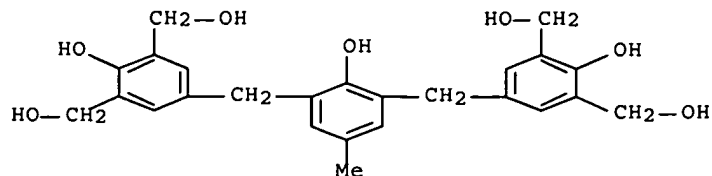


AB The neg.-working resist comprises (A) an alkali-soluble polymer I (A = H, alkyl, halo, etc.; R1,2 = H, halo, alkyl, alkenyl, etc.; and n = integer 1-3), (B) a crosslinker, (C) a photoacid, and a quaternary ammonium salt R3R4R5R6N+ B- (R3-6 = alkyl, alkenyl, aryl, etc.; and B = OH, halo, etc.). The neg.-working resist exhibited high sensitivity and high reson. when it is used as an electron-beam resist and an x-ray resist.

IT 197087-73-3 197087-74-4  
(crosslinker for neg.-working resist composition containing quaternary ammonium salt)

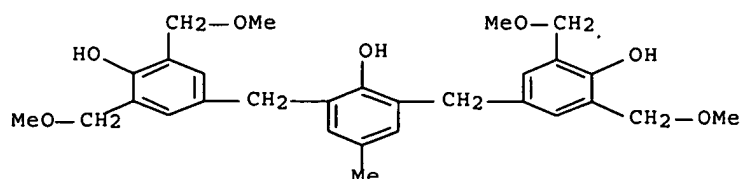
RN 197087-73-3 HCAPLUS

CN 1,3-Benzenedimethanol, 5,5'-[(2-hydroxy-5-methyl-1,3-phenylene)bis(methylene)]bis[2-hydroxy- (CA INDEX NAME)



10/562,361

RN 197087-74-4 HCAPLUS  
CN Phenol, 2,6-bis[[4-hydroxy-3,5-bis(methoxymethyl)phenyl]methyl]-4-methyl- (CA INDEX NAME)



IC ICM G03F007-038  
ICS C08F012-22; G03F007-004; H01L021-027  
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
Section cross-reference(s): 35, 38  
IT 161679-95-4 161679-98-7 185502-11-8 185502-14-1 185502-15-2  
197087-73-3 197087-74-4  
(crosslinker for neg.-working resist composition containing quaternary ammonium salt)

L50 ANSWER 8 OF 32 HCAPLUS COPYRIGHT 2008 ACS on STN  
ACCESSION NUMBER: 2003:653456 HCAPLUS Full-text  
DOCUMENT NUMBER: 139:171285  
TITLE: Negative-working resist composition containing sulfonic acid-generating photoacid  
INVENTOR(S): Yasunami, Shoichiro; Shirakawa, Hiroshi  
PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 48 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2003233186	A	20030822	JP 2002-32806	20020208
PRIORITY APPLN. INFO.:			JP 2002-32806	20020208

OTHER SOURCE(S): MARPAT 139:171285

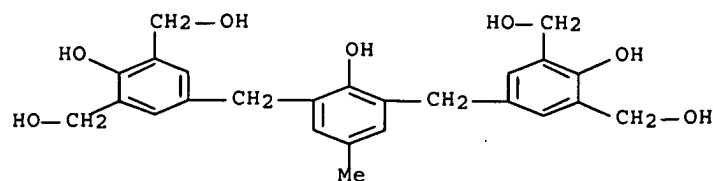
ED Entered STN: 22 Aug 2003

AB The neg.-working resist composition comprises (a) an alkali-soluble polymer, (b) a crosslinker which crosslinks (a) upon an interaction with an acid, (c) a photoacid generating sulfonic acid represented by Ra-SO3H (Ra = C4-30 alkyl, alkenyl, alkynyl), and (d) a photoacid generating sulfonic acid other than Ra-SO3H. The neg.-working resist composition satisfied all high sensitivity and high resolution, and a line edge roughness.

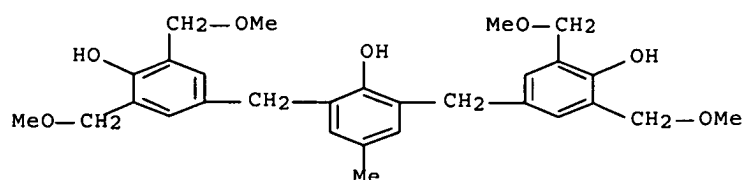
IT 197087-73-3P 197087-74-4P  
(crosslinker; neg.-working resist composition containing sulfonic acid-generating photoacid)

RN 197087-73-3 HCAPLUS

CN 1,3-Benzenedimethanol, 5,5'-[(2-hydroxy-5-methyl-1,3-phenylene)bis(methylene)]bis[2-hydroxy- (CA INDEX NAME)



RN 197087-74-4 HCAPLUS  
 CN Phenol, 2,6-bis[[4-hydroxy-3,5-bis(methoxymethyl)phenyl]methyl]-4-methyl- (CA INDEX NAME)



IC ICM G03F007-038  
 ICS H01L021-027  
 CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
 Section cross-reference(s): 25, 35, 38  
 IT 161679-94-3P 161679-95-4P 161679-98-7P 162846-57-3P  
 185502-11-8P 185502-14-1P 185502-15-2P 197087-73-3P  
 197087-74-4P  
 (crosslinker; neg.-working resist composition containing sulfonic acid-generating photoacid)

L50 ANSWER 9 OF 32 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2003:167237 HCAPLUS Full-text

DOCUMENT NUMBER: 138:212796

TITLE: Negative-working electron beam or x-ray resist compositions containing specific acid generator

INVENTOR(S): Yasunami, Shoichiro; Nishiyama, Fumiyuki; Hyakuta, Atsushi

PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 47 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2003066596	A	20030305	JP 2001-254879	20010824
US 20030054287	A1	20030320	US 2002-120551	20020412
PRIORITY APPLN. INFO.:			JP 2001-115596	A 20010413
			JP 2001-169770	A 20010605

OTHER SOURCE(S): MARPAT 138:212796

ED Entered STN: 05 Mar 2003

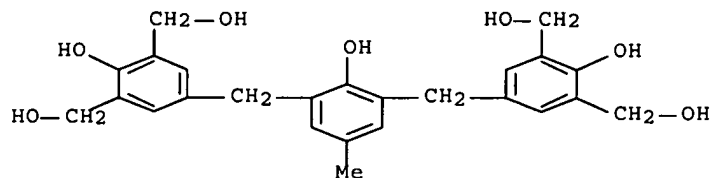
AB The title composition contains an alkali-soluble polymer, an acid-sensitive crosslinking agent, an actinic ray- or radiation-sensitive sulfonimide-based acid generator, wherein the acid generator has structure R1a-N(-SO<sub>2</sub>-R2a)(-SO<sub>2</sub>-R3a) (R1a-3a = alkyl, cycloalkyl, aryl, aralkyl, etc.). The composition shows the high sensitivity and provides the resist showing high resolution, good pattern profile, and the improved pattern line edge roughness.

IT 197087-73-3P 197087-74-4P

(crosslinking agent; neg.-working electron beam or x-ray resists compns.)

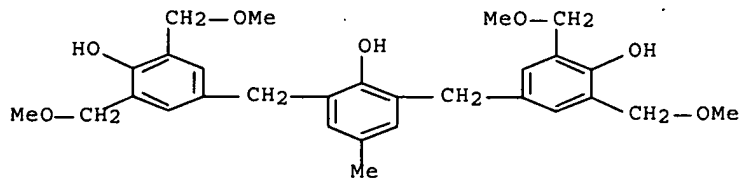
RN 197087-73-3 HCAPLUS

CN 1,3-Benzenedimethanol, 5,5'-[(2-hydroxy-5-methyl-1,3-phenylene)bis(methylene)]bis[2-hydroxy- (CA INDEX NAME)



RN 197087-74-4 HCAPLUS

CN Phenol, 2,6-bis[[4-hydroxy-3,5-bis(methoxymethyl)phenyl]methyl]-4-methyl- (CA INDEX NAME)



IC ICM G03F007-004

ICS C08F012-22; G03F007-038; H01L021-027

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

IT 161679-94-3P 161679-95-4P 161679-98-7P 185502-11-8P

185502-14-1P 185502-15-2P 197087-73-3P

197087-74-4P

(crosslinking agent; neg.-working electron beam or x-ray resists compns.)

L50 ANSWER 10 OF 32 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2002:959022 HCAPLUS Full-text

DOCUMENT NUMBER: 138:47307

TITLE: Negative-working resist composition containing quaternary ammonium compound

10/562,361

INVENTOR(S): Yasunami, Shoichiro; Takahashi, Omote  
 PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 44 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2002365802	A	20021218	JP 2001-174294	20010608
PRIORITY APPLN. INFO.:			JP 2001-174294	20010608

OTHER SOURCE(S): MARPAT 138:47307

ED Entered STN: 18 Dec 2002

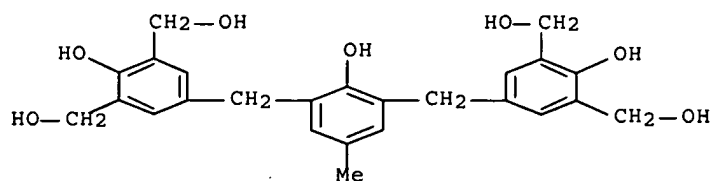
AB The neg.-working resist composition comprises (a) a photoacid, (b) an alkali-soluble polymer, (c) a crosslinker for crosslinking the polymer upon the interaction with the photoacid, and (d) a compound R1aR2aR3aN+-L1a-COO- (R1a-3a = alkyl, cycloalkyl, alkenyl, etc.; L1a = alkylene). The composition further contains a N-containing basic compound. The resist composition is used for an excimer laser having a wavelength 150-250 nm, an electron beam, and an x-ray.

IT 197087-73-3P 197087-74-4P

(crosslinker; neg.-working resist composition containing quaternary ammonium compound)

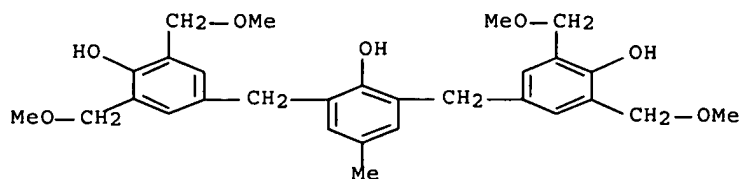
RN 197087-73-3 HCAPLUS

CN 1,3-Benzenedimethanol, 5,5'-[(2-hydroxy-5-methyl-1,3-phenylene)bis(methylene)]bis[2-hydroxy- (CA INDEX NAME)



RN 197087-74-4 HCAPLUS

CN Phenol, 2,6-bis[[4-hydroxy-3,5-bis(methoxymethyl)phenyl]methyl]-4-methyl- (CA INDEX NAME)



IC ICM G03F007-038  
 ICS G03F007-004; H01L021-027

10/562,361

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 35, 38

IT 161679-94-3P 161679-95-4P 161679-98-7P 162846-57-3P  
185502-11-8P 185502-14-1P 185502-15-2P 197087-73-3P  
197087-74-4P

(crosslinker; neg.-working resist composition containing quaternary ammonium compound)

L50 ANSWER 11 OF 32 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2002:737649 HCAPLUS Full-text

DOCUMENT NUMBER: 137:377352

TITLE: Application of lignophenol to positive-type photoresists

AUTHOR(S): Kadota, Joji; Hasegawa, Kiichi; Funaoka, Masamitsu; Uchida, Toshikazu; Kitajima, Kouichirou

CORPORATE SOURCE: Plastics Department, Osaka Municipal Technical Research Institute, Osaka, 536-8553, Japan

SOURCE: Nettowaku Porima (2002), 23(3), 142-149

CODEN: NPORF2; ISSN: 1342-0577

PUBLISHER: Gosei Jushi Kogyo Kyokai

DOCUMENT TYPE: Journal

LANGUAGE: Japanese

ED Entered STN: 30 Sep 2002

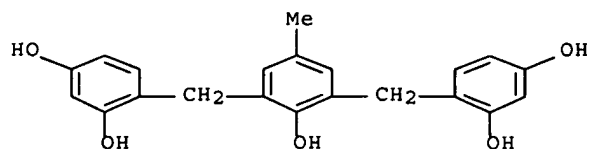
AB Recently, lignophenols have been obtained from lignin in wood-sources [Hinoki (Japanese cypress), beech, etc.], and now, the establishment of their use as industrial materials is required. We tried to apply them to pos.-type photoresists for printing and printed wiring boards, because they have the advantages of (1) good solubility in alkaline water, (2) sensitivity to UV irradiation and (3) resistance to heat. We used them instead of novolac resins in a novolac/diazonaphthoquinone system photoresist, resulting in giving photoresists with high sensitivity and less side etching through adding 3-nuclei novolac compds. to lignophenols.

IT 93933-64-3 148398-17-8

(lignophenols for pos.-type photoresists as substitutes of novolac resins)

RN 93933-64-3 HCAPLUS

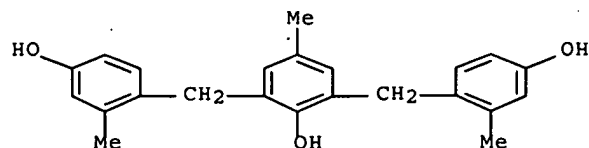
CN 1,3-Benzenediol, 4,4'-[(2-hydroxy-5-methyl-1,3-phenylene)bis(methylene)]bis- (CA INDEX NAME)



RN 148398-17-8 HCAPLUS

CN Phenol, 2,6-bis[(4-hydroxy-2-methylphenyl)methyl]-4-methyl- (CA INDEX NAME)



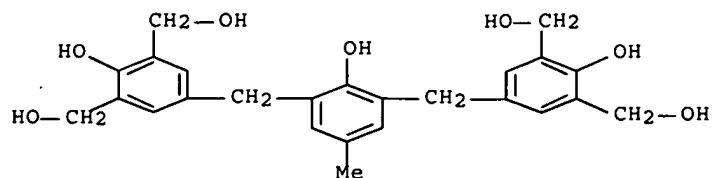


CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
 Section cross-reference(s): 43, 76  
 IT 1319-77-3, Cresol 9005-53-2, Lignin, uses 53208-22-3D, Diazonaphthoquinone, derivs. 93933-64-3 148398-17-8 475471-82-0, PS 105  
 (lignophenols for pos.-type photoresists as substitutes of novolak resins)

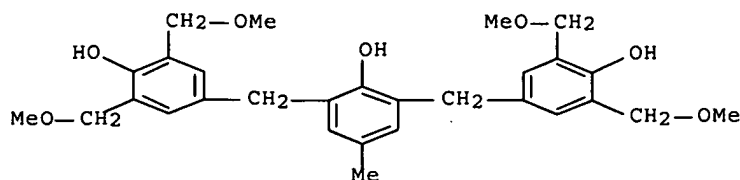
L50 ANSWER 12 OF 32 HCAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 2002:364224 HCAPLUS Full-text  
 DOCUMENT NUMBER: 136:393265  
 TITLE: Chemically-amplified negative-working resist compositions containing radical generators  
 INVENTOR(S): Adegawa, Yutaka  
 PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 83 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2002139836	A	20020517	JP 2000-336334	20001102
PRIORITY APPLN. INFO.:			JP 2000-336334	20001102

ED Entered STN: 16 May 2002  
 AB The compns., which show high sensitivity, high resolution, rectangular pattern profile, and PCD (post coating delay) and PED (post exposure delay) stability, contain (a) compds. which directly or indirectly generate radicals upon irradiation with energy ray. The compns. may contain (b) compds. which generate acids upon irradiation with energy ray, (c) alkali-soluble resins, and (d) crosslinking agents reacting by acids.  
 IT 197087-73-3P 197087-74-4P  
 (crosslinking agent; chemical-amplified neg.-working resist compns. containing compds. which generate radicals upon irradiation)  
 RN 197087-73-3 HCAPLUS  
 CN 1,3-Benzenedimethanol, 5,5'-[(2-hydroxy-5-methyl-1,3-phenylene)bis(methylene)]bis[2-hydroxy- (CA INDEX NAME)]



RN 197087-74-4 HCAPLUS  
 CN Phenol, 2,6-bis[[4-hydroxy-3,5-bis(methoxymethyl)phenyl]methyl]-4-methyl- (CA INDEX NAME)



IC ICM G03F007-038  
 ICS C08K005-00; C08L101-00; G03F007-004; H01L021-027  
 CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
 IT 161679-94-3P 161679-95-4P 161679-98-7P 162846-57-3P  
 185502-11-8P 185502-14-1P 185502-15-2P 197087-73-3P  
 197087-74-4P  
 (crosslinking agent; chemical-amplified neg.-working resist compns. containing compds. which generate radicals upon irradiation)

L50 ANSWER 13 OF 32 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2002:47839 HCAPLUS Full-text

DOCUMENT NUMBER: 136:126534

TITLE: Electron beam- or x-ray negative-working resist compositions for fine processing of semiconductor devices

INVENTOR(S): Aogo, Toshiaki

PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 48 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2002014470	A	20020118	JP 2000-194756	20000628
PRIORITY APPLN. INFO.:			JP 2000-194756	20000628

ED Entered STN: 18 Jan 2002

AB The compns. comprise (A) acid- and/or radical species-generating compds. by radiation of electron beam or x ray, (B) water-insol. and alkali aqueous solution-soluble polymers having  $\geq 1$  unsatd. bonds polymerizable by acids and/or radicals, (C) agents crosslinking with B by acids, and (D) solvents containing (a) 40-90% of  $\geq 1$  solvents selected from propylene glycol monomethyl ether acetate, propylene glycol monomethyl ether propionate, Me 3-methoxypropionate, Et 3-methoxypropionate, Me 3-ethoxypropionate, and Et 3-ethoxypropionate and (b) 10-60% of  $\geq 1$  solvents selected from propylene glycol monomethyl ether, propylene glycol monoethyl ether, Me lactate, Et lactate,

10/562,361

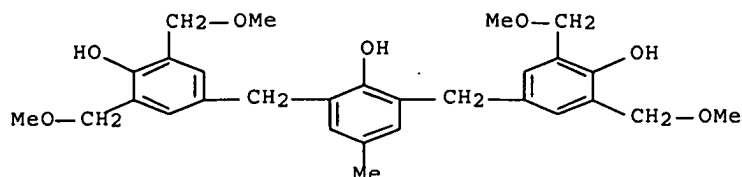
and diacetone alc. The compns. show high sensitivity and resolution, good coatability, and decreased development defects and give rectangular profiles.

IT 197087-74-4P

(crosslinking agents; electron-beam or x-ray neg. photoresists containing solvent mixts. for fine processing of semiconductors)

RN 197087-74-4 HCAPLUS

CN Phenol, 2,6-bis[[4-hydroxy-3,5-bis(methoxymethyl)phenyl]methyl]-4-methyl- (CA INDEX NAME)

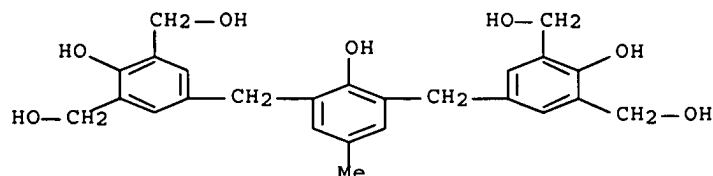


IT 197087-73-3

(reactants in preparation of crosslinking agents; electron-beam or x-ray neg. photoresists containing solvent mixts. for fine processing of semiconductors)

RN 197087-73-3 HCAPLUS

CN 1,3-Benzenedimethanol, 5,5'-[(2-hydroxy-5-methyl-1,3-phenylene)bis(methylene)]bis[2-hydroxy- (CA INDEX NAME)



IC ICM G03F007-038

ICS C08F290-12; C08K005-00; C08K005-13; C08L025-18; G03F007-004; G03F007-027; H01L021-027

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 76

IT 161679-94-3P 162846-57-3P 185502-15-2P 197087-74-4P

(crosslinking agents; electron-beam or x-ray neg. photoresists containing solvent mixts. for fine processing of semiconductors)

IT 110726-28-8, Trisp PA 161679-95-4 161679-98-7 185502-11-8 197087-73-3

(reactants in preparation of crosslinking agents; electron-beam or x-ray neg. photoresists containing solvent mixts. for fine processing of semiconductors)

L50 ANSWER 14 OF 32 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2001:524739 HCAPLUS Full-text

DOCUMENT NUMBER: 135:114444

TITLE: Electron beam or x-ray negative-working resist composition

10/562,361

INVENTOR(S): Aoai, Toshiaki; Adegawa, Yutaka; Yagihara, Morio  
 PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan  
 SOURCE: Eur. Pat. Appl., 85 pp.  
 CODEN: EPXXDW  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1117004	A2	20010718	EP 2001-100113	20010112
EP 1117004	A3	20030813		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
TW 289238	B	20071101	TW 2001-90100434	20010109
JP 2001337452	A	20011207	JP 2001-5374	20010112
US 6824948	B1	20041130	US 2001-759362	20010116
PRIORITY APPLN. INFO.:			JP 2000-4766	A 20000113
			JP 2000-84469	A 20000324

ED Entered STN: 20 Jul 2001

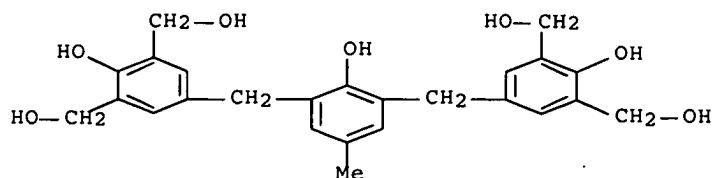
AB The invention relates to a neg.-working resist composition useful for super microlithog. such as VLSI and high-capacity microchips and to a composition capable of forming microfine patterns using X-rays and an electron beam, and to a composition suitable for working of semiconductor devices using an electron beam. A neg.-working resist composition for electron beams or x-rays comprises (a) a compound generating an acid and/or radical species by the irradiation of electron beams or x-rays, (b) a resin which is insol. in H2O and soluble in an alkali aqueous solution, (c) a crosslinking agent causing crosslinking with the resin of component (b) by the action of an acid, and (d) a compound having ≥1 unsatd. bond capable of being polymerized by an acid and/or a radical, and a neg.-working resist composition for electron beams or x-rays comprising (a) a compound generating an acid and/or radical species by the irradiation of electron beams or x-rays, (b') a resin having ≥1 unsatd. bond polymerizable by an acid and/or an alkali, which is insol. in H2O but soluble in an alkali aqueous solution, and (c) a crosslinking agent causing crosslinking with the resin (b') by the action of an acid are disclosed.

IT 197087-73-3P 197087-74-4P

(synthesis of acid crosslinking agent for neg.-working photoresist composition for X-ray or electron beam lithog.)

RN 197087-73-3 HCAPLUS

CN 1,3-Benzenedimethanol, 5,5'-[(2-hydroxy-5-methyl-1,3-phenylene)bis(methylene)]bis[2-hydroxy- (CA INDEX NAME)

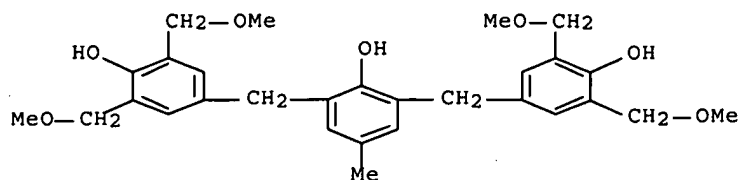


RN 197087-74-4 HCAPLUS

CN Phenol, 2,6-bis[[4-hydroxy-3,5-bis(methoxymethyl)phenyl]methyl]-4-

10/562,361

methyl- (CA INDEX NAME)

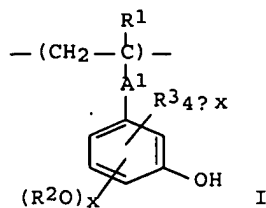


IC ICM G03F007-038  
ICS G03F007-004; G03F007-028  
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic  
and Other Reprographic Processes)  
Section cross-reference(s): 35, 36, 76  
IT 161679-94-3P 161679-95-4P 161679-98-7P 162846-57-3P  
185502-11-8P 185502-14-1P 185502-15-2P 197087-73-3P  
197087-74-4P  
(synthesis of acid crosslinking agent for neg.-working photoresist  
composition for X-ray or electron beam lithog.)

L50 ANSWER 15 OF 32 HCAPLUS COPYRIGHT 2008 ACS on STN  
ACCESSION NUMBER: 2001:524737 HCAPLUS Full-text  
DOCUMENT NUMBER: 135:114443  
TITLE: Negative-working resist composition  
INVENTOR(S): Uenishi, Kazuya; Adegawa, Yutaka; Shirakawa, Koji  
PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan  
SOURCE: Eur. Pat. Appl., 87 pp.  
CODEN: EPXXDW  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1117002	A1	20010718	EP 2001-100188	20010117
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
JP 2002049151	A	20020215	JP 2000-235949	20000803
JP 4070393	B2	20080402		
TW 581934	B	20040401	TW 2001-90100839	20010115
US 6673512	B1	20040106	US 2001-760806	20010117
PRIORITY APPLN. INFO.:			JP 2000-8229	A 20000117
			JP 2000-151477	A 20000523
			JP 2000-235949	A 20000803

OTHER SOURCE(S): MARPAT 135:114443  
ED Entered STN: 20 Jul 2001  
GI



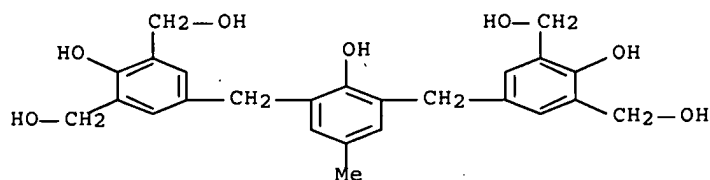
AB The invention relates to a neg.-working composition useful in ultramicro-lithog. or other photofabrication for production of VLSI or high-capacity microchips and to a neg.-working photoresists that can provide micropatterns using X-ray or electron beam, and that can be used in miniaturization processing of semiconductor devices using electron beams. The chemical amplification system neg.-working resist composition for an electron beam and/or an x-ray, has excellent in sensitivity and resolution and has a rectangular profile, comprising an alkali-soluble resin having structural units represented by (I), a compound generating an acid by irradiation of the electron beam or the x-ray, and a crosslinking agent which initiates crosslinking by the acid.

IT 197087-73-3P 197087-74-4P

(synthesis of acid crosslinking agent for neg.-working photoresist composition for X-ray or electron beam lithog.)

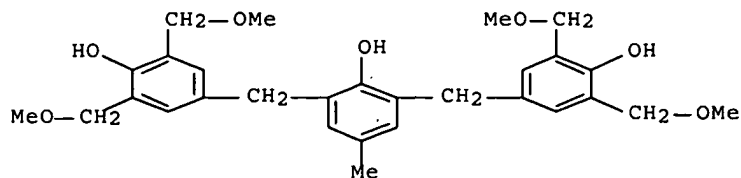
RN 197087-73-3 HCAPLUS

CN 1,3-Benzenedimethanol, 5,5'-[(2-hydroxy-5-methyl-1,3-phenylene)bis(methylene)]bis[2-hydroxy- (CA INDEX NAME)



RN 197087-74-4 HCAPLUS

CN Phenol, 2,6-bis[[4-hydroxy-3,5-bis(methoxymethyl)phenyl]methyl]-4-methyl- (CA INDEX NAME)



IC ICM G03F007-004

ICS G03F007-038

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic

10/562,361

and Other Reprographic Processes)

Section cross-reference(s): 35, 36, 76

IT 161679-94-3P 161679-95-4P 161679-98-7P 162846-57-3P  
185502-11-8P 185502-14-1P 185502-15-2P 197087-73-3P  
197087-74-4P

(synthesis of acid crosslinking agent for neg.-working photoresist composition for X-ray or electron beam lithog.)

REFERENCE COUNT: 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L50 ANSWER 16 OF 32 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2001:469374 HCAPLUS Full-text

DOCUMENT NUMBER: 135:84296

TITLE: Radiation-sensitive chemically amplified negative-working resist compositions containing vinylbenzodioxole derivatives polymers

INVENTOR(S): Adekawa, Yutaka

PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 30 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2001174994	A	20010629	JP 1999-358016	19991216
TW 525040	B	20030321	TW 2000-89126981	20001216
PRIORITY APPLN. INFO.:			JP 1999-358016	A 19991216
			JP 2000-49639	A 20000225

OTHER SOURCE(S): MARPAT 135:84296

ED Entered STN: 29 Jun 2001

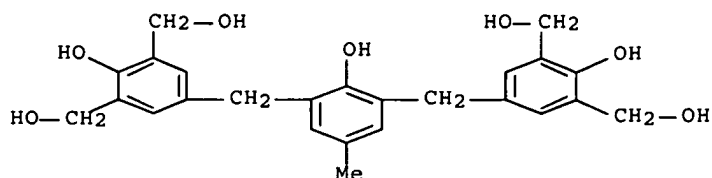
AB The resist compns. contain (A) alkaline-soluble resins involving structure units of 4-vinyl-1,3-benzodioxole derivs., compds. which generate acids by electron beam or x-ray irradiation, acid-crosslinkable crosslinking agents, and optionally F- and/or silicone-based surfactants. The compns. satisfy properties of sensitivity, developability, and resist pattern profiles to the use of electron beam or x-ray.

IT 197087-73-3 197087-74-4

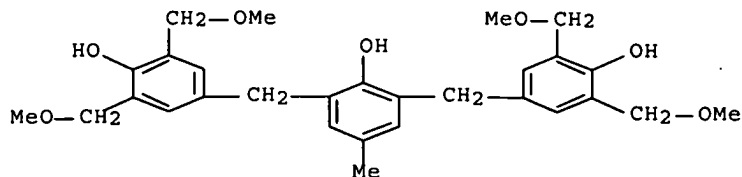
(crosslinking agent; radiation-sensitive chemical amplified neg.-working resist compns. containing vinylbenzodioxole derivs. polymers)

RN 197087-73-3 HCAPLUS

CN 1,3-Benzenedimethanol, 5,5'-[(2-hydroxy-5-methyl-1,3-phenylene)bis(methylene)]bis[2-hydroxy- (CA INDEX NAME)



RN 197087-74-4 HCAPLUS  
 CN Phenol, 2,6-bis[[4-hydroxy-3,5-bis(methoxymethyl)phenyl]methyl]-4-methyl- (CA INDEX NAME)

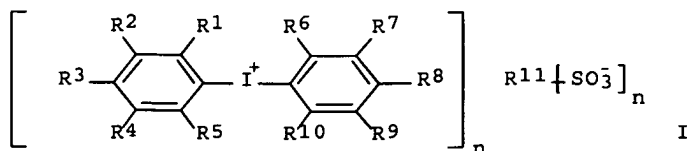


IC ICM G03F007-038  
 ICS C08F002-54; C08K005-00; C08L025-18; G03F007-004; G03F007-033;  
 H01L021-027  
 CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic  
 and Other Reprographic Processes)  
 IT 3089-11-0 32449-09-5 161679-98-7 185502-11-8 185502-14-1  
 197087-73-3 197087-74-4 346694-57-3 346694-58-4  
 (crosslinking agent; radiation-sensitive chemical amplified  
 neg.-working resist compns. containing vinylbenzodioxole derivs.  
 polymers)

L50 ANSWER 17 OF 32 HCAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 1999:209949 HCAPLUS Full-text  
 DOCUMENT NUMBER: 130:289224  
 TITLE: Negative-working image-recording  
 material useful as lithographic plate material  
 INVENTOR(S): Oshima, Yasuhito; Kobayashi, Fumikazu  
 PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 24 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 11084654	A	19990326	JP 1997-235819	19970901
PRIORITY APPLN. INFO.:			JP 1997-235819	19970901

OTHER SOURCE(S): MARPAT 130:289224  
 ED Entered STN: 02 Apr 1999  
 GI





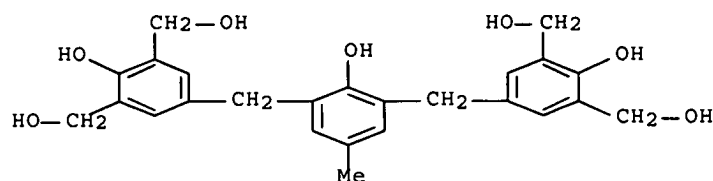
AB The title material comprise (a) an iodonium sulfonate having  $\geq 1$  NO<sub>2</sub> group I [R<sub>1</sub>-10 = H, NO<sub>2</sub>, halo, CN, OH, CO<sub>2</sub>H, (substituted) alkoxy, NR<sub>12</sub>R<sub>13</sub>, NR<sub>12</sub>COR<sub>13</sub>, COR<sub>12</sub>, CO<sub>2</sub>R<sub>12</sub>, CONR<sub>12</sub>R<sub>13</sub>, SO<sub>2</sub>R<sub>12</sub>, SO<sub>3</sub>R<sub>12</sub>, OCOR<sub>12</sub>, OSO<sub>2</sub>R<sub>12</sub>, SiR<sub>12</sub>R<sub>13</sub>R<sub>14</sub> {R<sub>12</sub>-14 = H or (substituted) hydrocarbon}, (substituted) hydrocarbon,  $\geq 1$  of R<sub>1</sub>-10 is NO<sub>2</sub>; R<sub>11</sub> = (substituted) n-valent hydrocarbon; n = pos. integer], (b) an alkali-soluble group-containing polymer, (c) and an acid-crosslinking compound, (d) an IR absorbent. The material is capable of direct platemaking from digital data by using IR ray solid lasers and semiconductor lasers and shows high photosensitivity, storage stability, and latitude in post exposure baking conditions.

IT 197087-73-3 197087-74-4

(crosslinking agent; neg.-working photosensitive composition containing iodonium sulfonate with nitro group as acid generator)

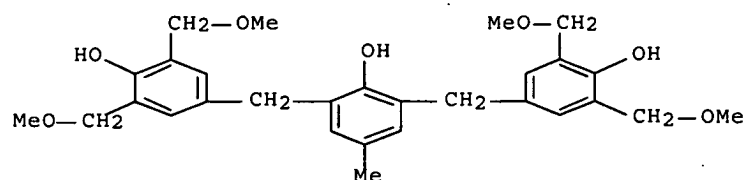
RN 197087-73-3 HCAPLUS

CN 1,3-Benzenedimethanol, 5,5'-[(2-hydroxy-5-methyl-1,3-phenylene)bis(methylene)]bis[2-hydroxy- (CA INDEX NAME)



RN 197087-74-4 HCAPLUS

CN Phenol, 2,6-bis[[4-hydroxy-3,5-bis(methoxymethyl)phenyl]methyl]-4-methyl- (CA INDEX NAME)



IT 9003-35-4, Formaldehyde-phenol copolymer

(neg.-working photosensitive composition containing iodonium sulfonate with nitro group as acid generator)

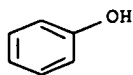
RN 9003-35-4 HCAPLUS

CN Phenol, polymer with formaldehyde (CA INDEX NAME)

CM 1

CRN 108-95-2

CMF C6 H6 O



CM 2

CRN 50-00-0

CMF C H2 O

 $\text{H}_2\text{C}=\text{O}$ 

IC ICM G03F007-038  
 ICS B41N001-14; G03F007-00; G03F007-004; G03F007-023  
 CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic  
 and Other Reprographic Processes)  
 IT 197087-73-3 197087-74-4  
 (crosslinking agent; neg.-working photosensitive composition containing  
 iodonium sulfonate with nitro group as acid generator)  
 IT 9003-35-4, Formaldehyde-phenol copolymer 24979-70-2,  
 Poly(p-hydroxystyrene) 90216-38-9, Allyl methacrylate-methacrylic  
 acid copolymer 222416-98-0 222417-00-7 222417-01-8 222417-02-9  
 222417-03-0 222417-04-1 222417-05-2 222417-06-3 222417-07-4  
 222417-09-6 222417-11-0 222417-12-1 222417-14-3  
 (neg.-working photosensitive composition containing iodonium sulfonate with  
 nitro group as acid generator)

L50 ANSWER 18 OF 32 HCAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 1998:770155 HCAPLUS Full-text  
 DOCUMENT NUMBER: 130:146034  
 TITLE: Effect of end-group on novolak resin properties  
 AUTHOR(S): Zampini, Anthony; Monaghan, Michael; Xu,  
 Cheng-Bai; Cardin, William  
 CORPORATE SOURCE: Shipley Company, Marlborough, MA, 01752, USA  
 SOURCE: Proceedings of SPIE-The International Society for  
 Optical Engineering (1998), 3333(Pt. 2, Advances  
 in Resist Technology and Processing XV), 1241-1250  
 CODEN: PSISDG; ISSN: 0277-786X  
 PUBLISHER: SPIE-The International Society for Optical  
 Engineering  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 ED Entered STN: 09 Dec 1998  
 AB Model compds. formed by the reaction of m-cresol with 2,6-bis(hydroxymethyl)-  
 p-cresol, DMPC, were isolated and characterized by  $^{13}\text{C}$  NMR. DMPC was found to  
 couple at the 2, 4, and 6-positions of m-cresol at a rate of 12%, 34% and 54%  
 resp. The condensation reactions of m-cresol and DMPC with 2-hydroxy-3,5-  
 dimethylbenzyl alc., 2-HDBA, or 4-hydroxy-3,5-dimethylbenzyl alc., 4-HDBA,  
 were determined by  $^{13}\text{C}$  NMR to form novolak resins in a manner predicted by  
 model compound data. The introduction of 2,4-dimethylphenol and 2,6-  
 dimethylphenol as specific end-groups to novolak resins was demonstrated to  
 affect both the resin dissoln. and photoresist properties. Novolaks end-  
 capped with the more highly o-o' coupled 2,4-dimethylphenol group have lower

10/562,361

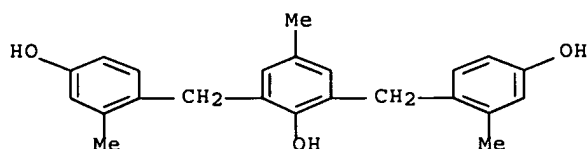
dissohn. rates while the more p-p' coupled, intermol. oriented, 2,6-dimethylphenol group show higher dissohn. rates in TMAH. For the resins investigated, photoresist resolution properties appear to be dictated by the bulk resin structure. Photospeed, however, was greatly enhanced by the 2,6-dimethylphenol end-group. This knowledge was then applied towards the design of novolak resins having built-in dissohn. and photospeed promoters, and a novolak/diazonaphthoquinone 0.25 $\mu$ m capable i-line photoresist.

IT 148398-17-8P

(effect of end-group on novolak resin properties)

RN 148398-17-8 HCAPLUS

CN Phenol, 2,6-bis[(4-hydroxy-2-methylphenyl)methyl]-4-methyl- (CA INDEX NAME)



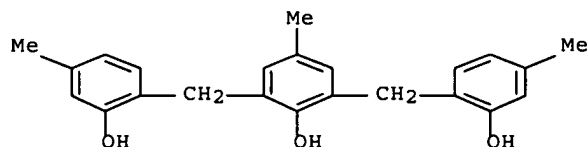
IT 137914-04-6P 145612-73-3P 145612-74-4P

220061-37-0P 220061-38-1P

(in preparation of model compds. for investigating effect of end-group on novolak resin properties)

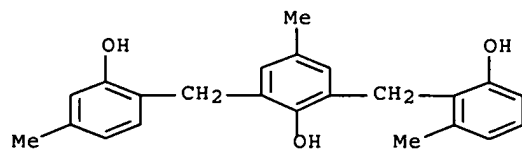
RN 137914-04-6 HCAPLUS

CN Phenol, 2,6-bis[(2-hydroxy-4-methylphenyl)methyl]-4-methyl- (CA INDEX NAME)



RN 145612-73-3 HCAPLUS

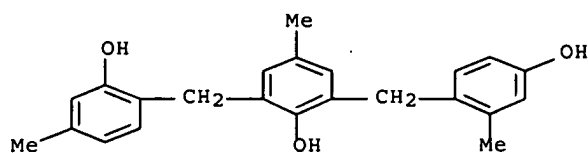
CN Phenol, 2-[(2-hydroxy-4-methylphenyl)methyl]-6-[(2-hydroxy-6-methylphenyl)methyl]-4-methyl- (9CI) (CA INDEX NAME)



RN 145612-74-4 HCAPLUS

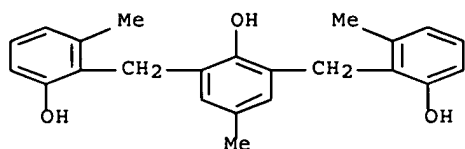
CN Phenol, 2-[(2-hydroxy-4-methylphenyl)methyl]-6-[(4-hydroxy-2-methylphenyl)methyl]-4-methyl- (CA INDEX NAME)

10/562,361



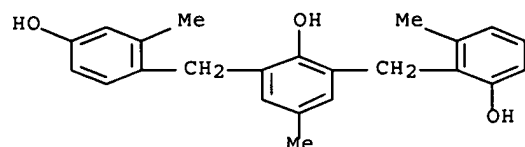
RN 220061-37-0 HCAPLUS

CN Phenol, 2,6-bis[(2-hydroxy-6-methylphenyl)methyl]-4-methyl- (CA INDEX NAME)



RN 220061-38-1 HCAPLUS

CN Phenol, 2-[(2-hydroxy-6-methylphenyl)methyl]-6-[(4-hydroxy-2-methylphenyl)methyl]-4-methyl- (CA INDEX NAME)



CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 36

IT 130425-63-7DP, dimethylphenol terminated 130425-63-7P  
148398-17-8P

(effect of end-group on novolak resin properties)

IT 137914-04-6P 145612-73-3P 145612-74-4P  
220061-37-0P 220061-38-1P

(in preparation of model compds. for investigating effect of end-group on novolak resin properties)

REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR  
THIS RECORD. ALL CITATIONS AVAILABLE IN THE  
RE FORMAT

L50 ANSWER 19 OF 32 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1998:76151 HCAPLUS Full-text

DOCUMENT NUMBER: 128:186524

ORIGINAL REFERENCE NO.: 128:36739a,36742a

TITLE: Negative-working lithographic printing plate with  
improved printing durability

INVENTOR(S): Aoshima, Katsataro

10/562,361

PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 25 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 10029292	A	19980203	JP 1996-187940	19960717
JP 3816152	B2	20060830		
PRIORITY APPLN. INFO.:			JP 1996-187940	19960717

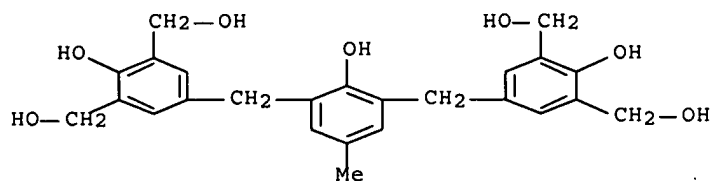
ED Entered STN: 09 Feb 1998

AB The material comprises  $\geq 1$  (meth)acrylate polymer having hydroxyaryl in a side chain, a crosslinking agent crosslinkable with an acid, an acid-generating compound by light or heat, and an IR absorbing agent. The plate is useful for neg.-type lithog. direct printing by solid-state or semiconductor laser exposure.

IT 197087-73-3 197087-74-4  
 (crosslinking agents; neg.-working lithog. printing plate with improved printing durability)

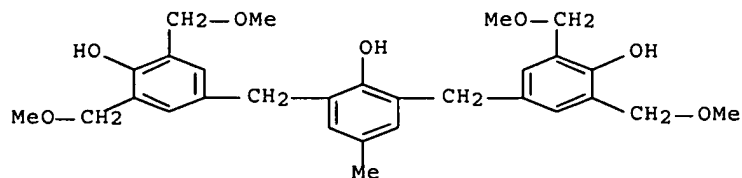
RN 197087-73-3 HCAPLUS

CN 1,3-Benzenedimethanol, 5,5'-[(2-hydroxy-5-methyl-1,3-phenylene)bis(methylene)]bis[2-hydroxy- (CA INDEX NAME)



RN 197087-74-4 HCAPLUS

CN Phenol, 2,6-bis[[4-hydroxy-3,5-bis(methoxymethyl)phenyl]methyl]-4-methyl- (CA INDEX NAME)



IC ICM B41C001-055

ICS G03F007-00; G03F007-033

CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 38

IT 531-18-0, Hexamethylolmelamine 185502-11-8 197087-73-3

197087-74-4

(crosslinking agents; neg.-working lithog. printing plate with improved printing durability)

L50 ANSWER 20 OF 32 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1998:55934 HCAPLUS Full-text

DOCUMENT NUMBER: 128:174175

ORIGINAL REFERENCE NO.: 128:34205a,34208a

TITLE: Negative-working IR-sensitive image recording material for lithographic printing plate

INVENTOR(S): Aoshima, Keitaro

PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 29 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 10016423	A	19980120	JP 1996-171307	19960701
JP 3636827	B2	20050406		
PRIORITY APPLN. INFO.:			JP 1996-171307	19960701

ED Entered STN: 30 Jan 1998

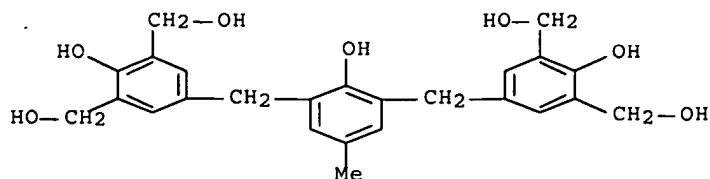
AB The recording material comprises (A)  $\geq 1$  polymer having hydroxyaryl groups in side chains, (B) a thermal crosslinking agent, (C) an acid generator, and (D) an IR absorber. Preferably, the crosslinking agent is a phenol derivative having hydroxymethyl or alkoxymethyl connecting to  $\geq 2$  benzene rings, and the acid generator decomps. at  $\geq 100^\circ$ , and the IR absorber absorbs light at 720-1200 nm. The recording material is useful for direct platemaking by using IR laser. The recording material shows high film strength and printability.

IT 197087-73-3P 197087-74-4P

(crosslinking agent; neg.-working IR-sensitive image recording material for lithog. printing plate with high printability)

RN 197087-73-3 HCAPLUS

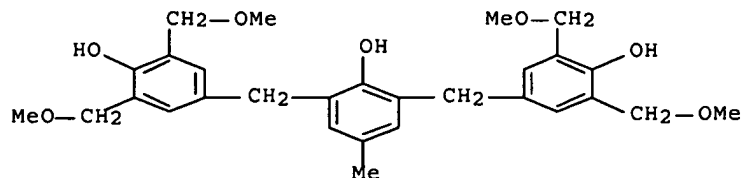
CN 1,3-Benzenedimethanol, 5,5'-[(2-hydroxy-5-methyl-1,3-phenylene)bis(methylene)]bis[2-hydroxy- (CA INDEX NAME)



RN 197087-74-4 HCAPLUS

CN Phenol, 2,6-bis[[4-hydroxy-3,5-bis(methoxymethyl)phenyl]methyl]-4-methyl- (CA INDEX NAME)

10/562,361

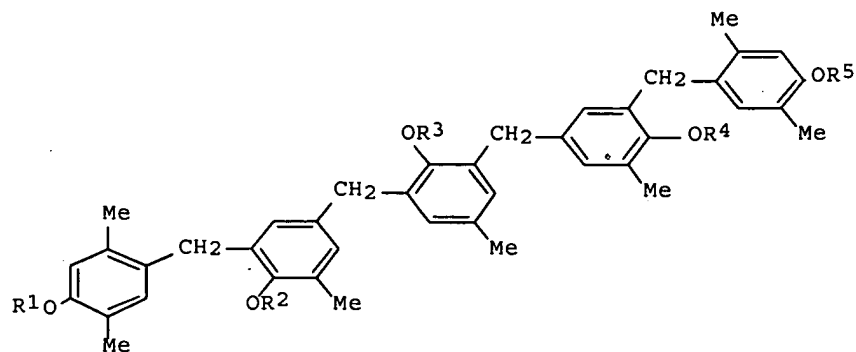


IC ICM B41N001-14  
ICS B41C001-055; G03F007-00; G03F007-004; G03F007-038  
CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic  
and Other Reprographic Processes)  
Section cross-reference(s): 25, 38  
IT 161679-94-3P 161679-95-4P 161679-98-7P 185502-11-8P  
185502-14-1P 185502-15-2P 197087-73-3P  
197087-74-4P  
(crosslinking agent; neg.-working IR-sensitive image recording  
material for lithog. printing plate with high printability)

L50 ANSWER 21 OF 32 HCAPLUS COPYRIGHT 2008 ACS on STN  
ACCESSION NUMBER: 1997:732327 HCAPLUS Full-text  
DOCUMENT NUMBER: 128:13137  
ORIGINAL REFERENCE NO.: 128:2549a,2552a  
TITLE: Preparation of pentaphenols, photosensitizers, and  
photoresist compositions  
INVENTOR(S): Inoue, Hirotaka; Ozaki, Haruki  
PATENT ASSIGNEE(S): Sumitomo Chemical Co., Ltd., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	-----
JP 09291056	A	19971111	JP 1996-102487	19960424
JP 3921702	B2	20070530		
PRIORITY APPLN. INFO.:			JP 1996-102487	19960424

OTHER SOURCE(S): MARPAT 128:13137  
ED Entered STN: 20 Nov 1997  
GI



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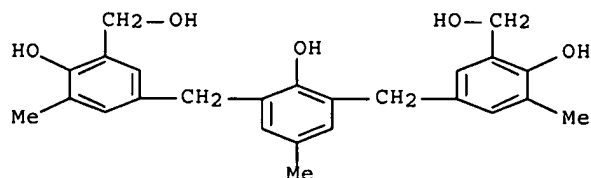
AB Pentaphenols I (R<sub>1</sub>-R<sub>5</sub> = H, 1,2-naphthoquinonediazido-4- or -5-sulfonyl) are prepared as (precursors for) sensitizers for photoresist compns. containing alkali-soluble novolak resins. 2,6-Bis(4-hydroxy-3-hydroxymethyl-5-methylbenzyl)-4-methylphenol (40.8 parts, preparation given) was treated with 97.8 parts 2,5-xylene in MeOH in the presence of p-MeC<sub>6</sub>H<sub>4</sub>SO<sub>3</sub>H at 40° for 3 h to give 25.3 parts I (R<sub>1</sub>-R<sub>5</sub> = H), 6.2 parts of which was treated with 5.4 parts 1,2-naphthoquinonediazido-5-sulfonyl chloride in 1,4-dioxane in the presence of NEt<sub>3</sub> at 25° for 3 h to give 10.6 parts sensitizer. A resist solution was prepared using the sensitizer to show good sensitivity, resolution, and profile, high γ value, and no scum.

IT 170446-63-6P

(in preparation of pentaphenols as photosensitizers for photoresist compns.)

RN 170446-63-6 HCAPLUS

CN Benzenemethanol, 3,3'-[(2-hydroxy-5-methyl-1,3-phenylene)bis(methylene)]bis[6-hydroxy-5-methyl- (9CI) (CA INDEX NAME)



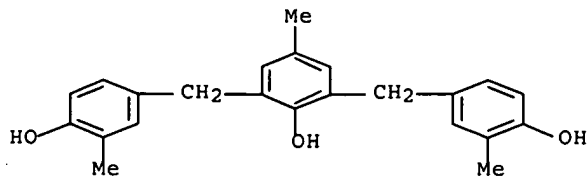
IT 115052-64-7, 2,6-Bis(4-hydroxy-3-methylbenzyl)-4-methylphenol

(in preparation of pentaphenols as photosensitizers for photoresist compns.)

RN 115052-64-7 HCAPLUS

CN Phenol, 2,6-bis[(4-hydroxy-3-methylphenyl)methyl]-4-methyl- (CA INDEX NAME)





IC ICM C07C039-15  
 ICS C07C309-76; G03F007-022; C07C303-28  
 CC 25-10 (Benzene, Its Derivatives, and Condensed Benzenoid Compounds)  
 Section cross-reference(s): 74  
 IT 170446-63-6P  
 (in preparation of pentaphenols as photosensitizers for photoresist  
 compns.)  
 IT 95-87-4, 2,5-Xylenol 115052-64-7, 2,6-Bis(4-hydroxy-3-  
 methylbenzyl)-4-methylphenol  
 (in preparation of pentaphenols as photosensitizers for photoresist  
 compns.)

L50 ANSWER 22 OF 32 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1997:632451 HCAPLUS Full-text

DOCUMENT NUMBER: 127:313151

ORIGINAL REFERENCE NO.: 127:61145a,61148a

TITLE: Negative image recording material for  
 planographic printing plate preparation

INVENTOR(S): Aoshima, Keitaro; Kitatani, Katsuji; Kobayashi,  
 Fumikazu

PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan

SOURCE: Eur. Pat. Appl., 50 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 2

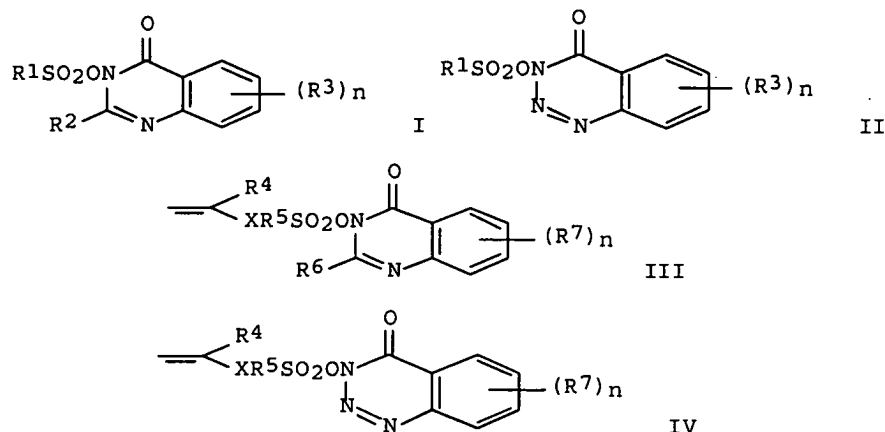
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	-----
EP 795789	A1	19970917	EP 1997-103663	19970305
EP 795789	B1	20000209		
R: DE, GB				
JP 09239945	A	19970916	JP 1996-53035	19960311
JP 10080994	A	19980331	JP 1997-33760	19970218
PRIORITY APPLN. INFO.:			JP 1996-53035	A 19960311
			JP 1996-187943	A 19960717

OTHER SOURCE(S): MARPAT 127:313151

ED Entered STN: 04 Oct 1997

GI



AB A neg. image recording material for planog. printing plate preparation comprises (A) at least one of compds. represented by the formulas I or II (R1, R2 = a hydrocarbon group having not more than 20 carbon atoms; R3 = a halogen atom or a hydrocarbon group having not more than 10 carbon atoms; n = an integer of 0-4) or at least one of polymers obtained by radical polymerization using at least one of monomers represented by the formulas III or IV (R4 = H or a hydrocarbon group having not more than 20 carbon atoms; R5 = a single bond or a divalent hydrocarbon group having not more than 20 carbon atoms; R6 = a hydrocarbon group having not more than 20 carbon atoms; R7 = a halogen atom or a hydrocarbon group having not more than 10 carbon atoms), (B) at least one crosslinking agent, (C) at least one IR-absorbing agent, and (D) at least one novolak resin.

IT 9003-35-4

(planog. printing plate preparation using neg. photoimaging compns. containing)

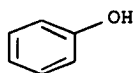
RN 9003-35-4 HCAPLUS

CN Phenol, polymer with formaldehyde (CA INDEX NAME)

CM 1

CRN 108-95-2

CMF C6 H6 O



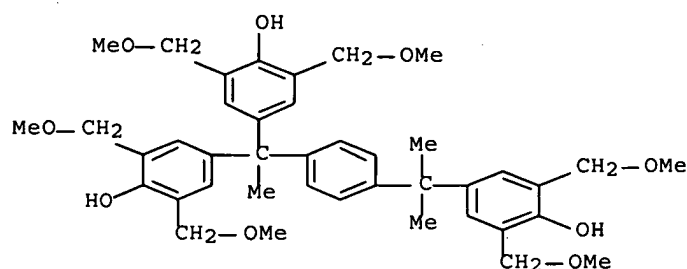
CM 2

CRN 50-00-0

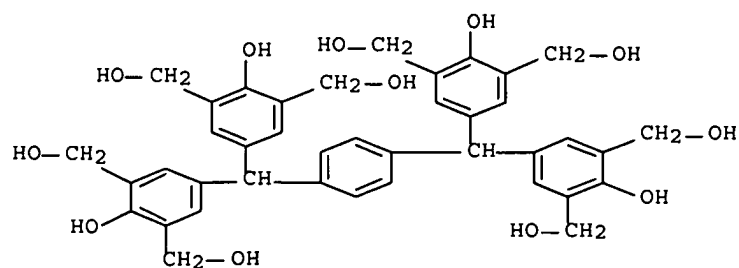
CMF C H2 O



IT 161679-94-3P 161679-95-4P 162846-57-3P  
 185502-11-8P 185502-15-2P 197087-71-1P  
 197087-72-2P 197087-73-3P 197087-74-4P  
 (preparation and use in photoimaging compns. for planog.  
 printing plate preparation)  
 RN 161679-94-3 HCAPLUS  
 CN Phenol, 4,4'-[1-[4-[1-[4-hydroxy-3,5-bis(methoxymethyl)phenyl]-1-methylethyl]phenyl]ethylidene]bis[2,6-bis(methoxymethyl)- (CA INDEX NAME)

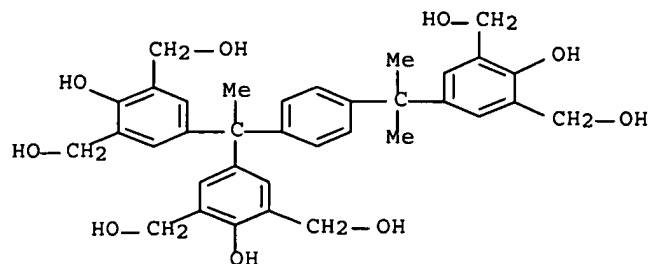


RN 161679-95-4 HCAPLUS  
 CN 1,3-Benzenedimethanol, 5,5',5'',5'''-(1,4-phenylenedimethyldiene)tetrakis[2-hydroxy- (9CI) (CA INDEX NAME)



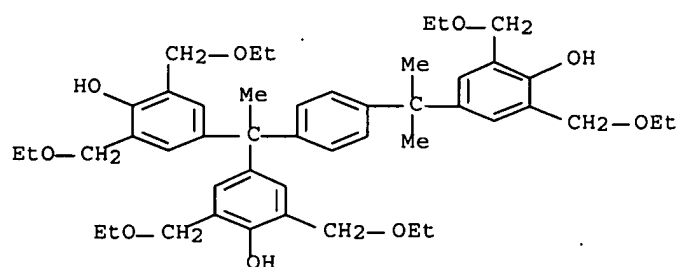
RN 162846-57-3 HCAPLUS  
 CN 1,3-Benzenedimethanol, 5,5'-[1-[4-[1-[4-hydroxy-3,5-bis(hydroxymethyl)phenyl]-1-methylethyl]phenyl]ethylidene]bis[2-hydroxy- (CA INDEX NAME)

10/562,361



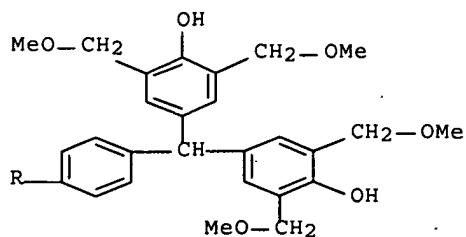
RN 185502-11-8 HCAPLUS

CN Phenol, 4,4'-[1-[4-[1-[3,5-bis(ethoxymethyl)-4-hydroxyphenyl]-1-methylethyl]phenyl]ethylidene]bis[2,6-bis(ethoxymethyl)- (9CI) (CA INDEX NAME)

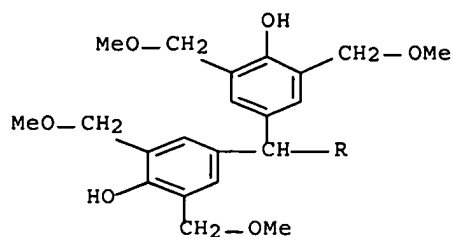


RN 185502-15-2 HCAPLUS

CN Phenol, 4,4',4'',4'''-(1,4-phenylenedimethylidyne)tetrakis[2,6-bis(methoxymethyl)- (9CI) (CA INDEX NAME)

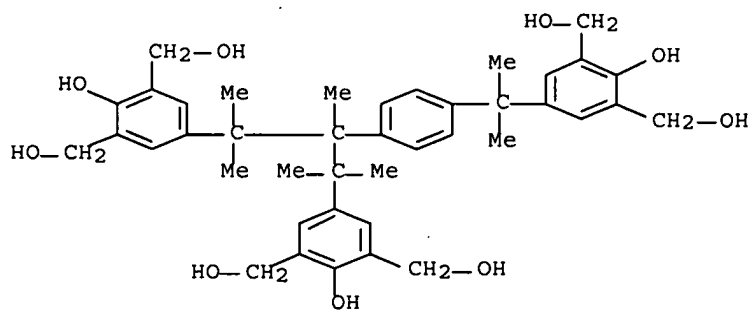


PAGE 1-A



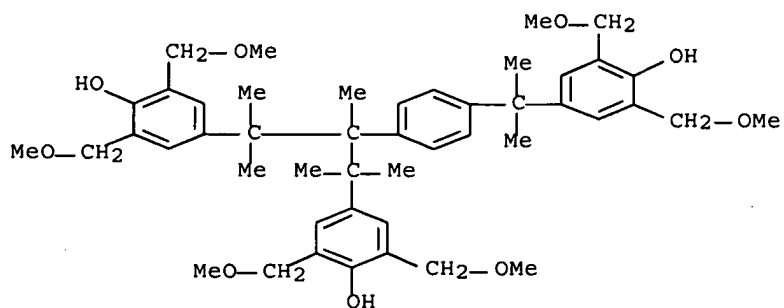
RN 197087-71-1 HCAPLUS

CN 1,3-Benzenedimethanol, 5,5'-[2-[4-[1-[4-hydroxy-3,5-bis(hydroxymethyl)phenyl]-1-methylethyl]phenyl]-1,1,2,3,3-pentamethyl-1,3-propanediyl]bis[2-hydroxy- (9CI) (CA INDEX NAME)



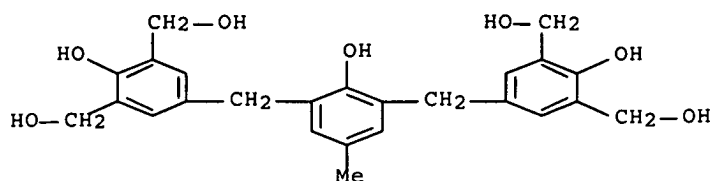
RN 197087-72-2 HCAPLUS

CN Phenol, 4,4'-[2-[4-[1-[4-hydroxy-3,5-bis(methoxymethyl)phenyl]-1-methylethyl]phenyl]-1,1,2,3,3-pentamethyl-1,3-propanediyl]bis[2,6-bis(methoxymethyl)- (9CI) (CA INDEX NAME)



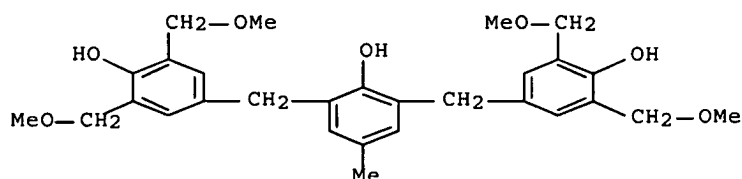
RN 197087-73-3 HCAPLUS

CN 1,3-Benzenedimethanol, 5,5'-[(2-hydroxy-5-methyl-1,3-phenylene)bis(methylene)]bis[2-hydroxy- (CA INDEX NAME)



RN 197087-74-4 HCAPLUS

CN Phenol, 2,6-bis[[4-hydroxy-3,5-bis(methoxymethyl)phenyl]methyl]-4-methyl- (CA INDEX NAME)



IC ICM G03F007-038

ICS G03F007-004

CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

ST neg photoimaging compn planog printing plate;  
benzodiazolinone neg photoimaging compn lithog plate;  
benzotriazolinone neg photoimaging compn lithog plate

IT Photoimaging materials  
(neg.; containing benzodiazolinone derivs. for planog. printing plate preparation)

IT Phenolic resins, uses  
(planog. printing plate preparation using neg. photoimaging compns. containing)

IT 2390-60-5, Victoria Pure Blue BOH 9003-35-4 10409-07-1  
22371-56-8, NK-3508 54769-57-2 56530-39-3 85568-56-5, Megafac F  
177 91222-51-4 130558-04-2 159300-88-6 197087-69-7  
(planog. printing plate preparation using neg. photoimaging compns. containing)

IT 161679-94-3P 161679-95-4P 162846-57-3P  
185502-11-8P 185502-15-2P 194536-20-4P  
197087-71-1P 197087-72-2P 197087-73-3P  
197087-74-4P

(preparation and use in photoimaging compns. for planog. printing plate preparation)

IT 110726-28-8, 1-[α-Methyl-α-(4-hydroxyphenyl)ethyl]-4-[α,α-bis(4-hydroxyphenyl)ethyl]benzene  
(reaction in preparing phenol derivs. for photosensitive compns. for planog. printing plate preparation)

L50 ANSWER 23 OF 32 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1997:618534 HCAPLUS Full-text

DOCUMENT NUMBER: 127:313157

10/562,361

ORIGINAL REFERENCE NO.: 127:61149a,61152a  
 TITLE: Negative-working image-forming material for  
 presensitized lithographic plate  
 INVENTOR(S): Aoshima, Keitaro; Kitaya, Katsushi; Kobayashi,  
 Fumikazu  
 PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 27 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 2  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 09239945	A	19970916	JP 1996-53035	19960311
EP 795789	A1	19970917	EP 1997-103663	19970305
EP 795789	B1	20000209		
R: DE, GB				
US 6403283	B1	20020611	US 1997-811932	19970305
PRIORITY APPLN. INFO.:			JP 1996-53035	A 19960311
			JP 1996-187943	A 19960717

ED Entered STN: 27 Sep 1997  
 GI

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

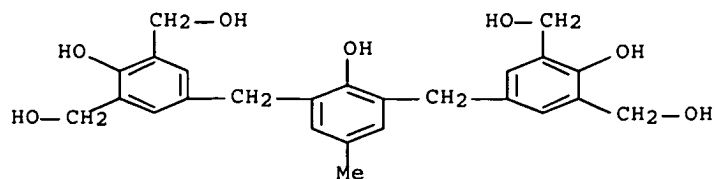
AB The material contains (A)  $\geq 1$  of I, II,  $R_1SO_2ONR_4COR_5$ ,  $Ar_1(SO_2)_2Ar_2$ , and III  
 [R1-5 = (substituted)  $C_{\leq 20}$  hydrocarbon; R3 = halo, (substituted)  $C_{\leq 10}$   
 hydrocarbon,  $C_{\leq 10}$  alkoxy; Ar1-2 = (substituted)  $C_{\leq 20}$  aryl; R6 = (substituted)  
 $C_{\leq 20}$  divalent hydrocarbon; n = 0-4], (B) a phenol derivative with mol. weight  
 $\leq 1200$  containing  $\geq 2$  hydroxymethyl or alkoxymethyl groups and 3-5 benzene  
 rings, (C) an IR ray absorbing agent, and (D)  $\geq 1$  novolak resin. The material  
 shows good storage stability and is useful for direct platemaking by IR  
 digital data.

IT 197087-73-3 197087-74-4

(presensitized lithog. plate containing sulfonyl compound and  
 hydroxymethyl phenolic compound)

RN 197087-73-3 HCAPLUS

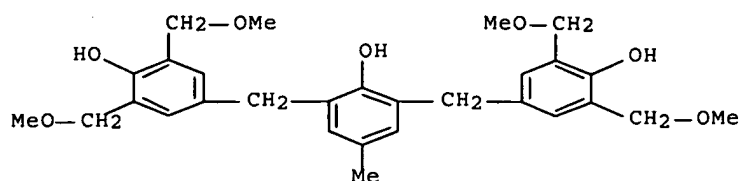
CN 1,3-Benzenedimethanol, 5,5'-[(2-hydroxy-5-methyl-1,3-  
 phenylene)bis(methylene)]bis[2-hydroxy- (CA INDEX NAME)



RN 197087-74-4 HCAPLUS

10/562,361

CN Phenol, 2,6-bis[[4-hydroxy-3,5-bis(methoxymethyl)phenyl]methyl]-4-methyl- (CA INDEX NAME)



IC ICM B41C001-055  
ICS G03F007-00; G03F007-004; G03F007-038  
CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
IT 10409-07-1 54769-57-2 56530-39-3 91222-51-4 130536-25-3  
130558-04-2 159300-88-6 161679-95-4 161679-98-7 185502-11-8  
185502-14-1 185502-15-2 197087-73-3 197087-74-4  
(presensitized lithog. plate containing sulfonyl compound and hydroxymethyl phenolic compound)

L50 ANSWER 24 OF 32 HCAPLUS COPYRIGHT 2008 ACS on STN  
ACCESSION NUMBER: 1997:399936 HCAPLUS Full-text  
DOCUMENT NUMBER: 127:19538  
ORIGINAL REFERENCE NO.: 127:3893a,3896a  
TITLE: Positive resist composition and quinone diazide photosensitizers  
INVENTOR(S): Ichikawa, Koji; Osaki, Haruyoshi; Inoue, Hiroki  
PATENT ASSIGNEE(S): Sumitomo Chemical Company, Limited, Japan  
SOURCE: Eur. Pat. Appl., 37 pp.  
CODEN: EPXXDW  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 769485	A1	19970423	EP 1996-116688	19961017
EP 769485	B1	20020313		
R: DE, FR, GB, IT, NL				
JP 09110759	A	19970428	JP 1995-270297	19951018
JP 3855285	B2	20061206		
JP 09110762	A	19970428	JP 1995-270305	19951018
JP 3834852	B2	20061018		
JP 09114093	A	19970502	JP 1995-270294	19951018
JP 3209058	B2	20010917		
JP 09286751	A	19971104	JP 1996-101224	19960423
JP 09286752	A	19971104	JP 1996-101225	19960423
JP 3921698	B2	20070530		
JP 09286753	A	19971104	JP 1996-101226	19960423
JP 3921699	B2	20070530		
JP 09291054	A	19971111	JP 1996-102485	19960424
JP 3921700	B2	20070530		
JP 10007610	A	19980113	JP 1996-159710	19960620
JP 3921709	B2	20070530		



10/562,361

US 5866724	A	19990202	US 1996-733166	19961017
PRIORITY APPLN. INFO.:			JP 1995-270294	A 19951018
			JP 1995-270297	A 19951018
			JP 1995-270305	A 19951018
			JP 1996-101224	A 19960423
			JP 1996-101225	A 19960423
			JP 1996-101226	A 19960423
			JP 1996-102485	A 19960424
			JP 1996-159710	A 19960620

OTHER SOURCE(S): MARPAT 127:19538

ED Entered STN: 28 Jun 1997

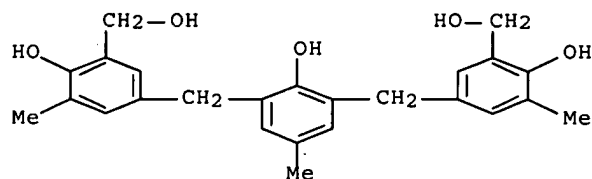
AB A high-resolution pos. photoresist composition comprises, as photosensitizer, a sulfoquinone diazide ester of a polyphenol compound having 4-6 phenol nuclei linked by (un)substituted methylene bridges and represented by a specified general formula. Thus, p-cresol was condensed 2:1 with 4,4'-methylenebis[2-(hydroxymethyl)-3,6-dimethylphenol] to give a tetraphenol, which was esterified with 5-(chlorosulfonyl)-1,2-naphthoquinone diazide to give a photosensitizer (I; degree of esterification unspecified). A cresol novolak resin solution was compounded with I and spin-coated on a Si wafer to dry thickness 1.1  $\mu\text{m}$ , irradiated in steps at 365 nm, and developed to show effective sensitivity 300 ms and resolution 0.32  $\mu\text{m}$ .

IT 170446-63-6P 189957-63-9P 190321-07-4P,  
2,6-Bis(4-hydroxy-2,5-dimethylbenzyl)-3,4-dimethylphenol  
190321-08-5P, 2,6-Bis[4-hydroxy-3-(hydroxymethyl)-2,5-  
dimethylbenzyl]-3,4-dimethylphenol 190321-11-0P  
190321-12-1P

(preparation of quinone diazide photosensitizers and pos. resist compns.)

RN 170446-63-6 HCAPLUS

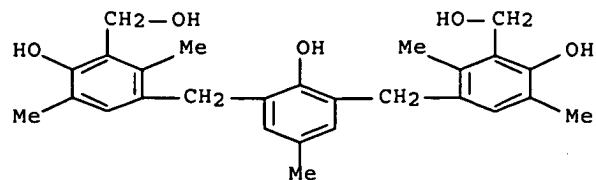
CN Benzenemethanol, 3,3'-[(2-hydroxy-5-methyl-1,3-phenylene)bis(methylene)]bis[6-hydroxy-5-methyl- (9CI) (CA INDEX NAME)



RN 189957-63-9 HCAPLUS

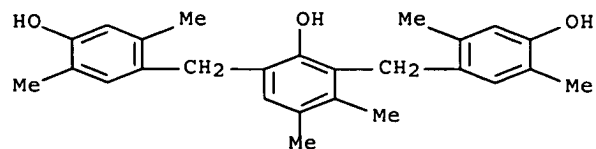
CN Benzenemethanol, 3,3'-[(2-hydroxy-5-methyl-1,3-phenylene)bis(methylene)]bis[6-hydroxy-2,5-dimethyl- (9CI) (CA INDEX NAME)

10/562,361



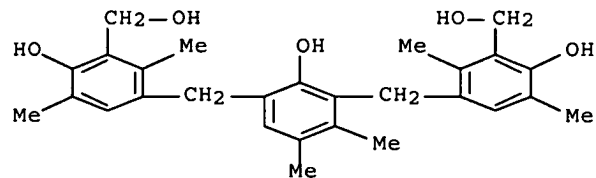
RN 190321-07-4 HCAPLUS

CN Phenol, 2,6-bis[(4-hydroxy-2,5-dimethylphenyl)methyl]-3,4-dimethyl-  
(CA INDEX NAME)



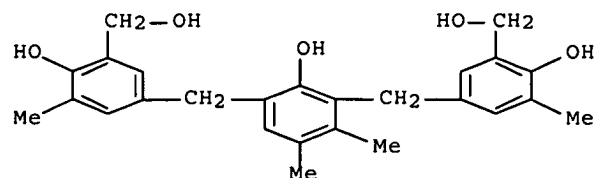
RN 190321-08-5 HCAPLUS

CN Benzenemethanol, 3,3'-[(2-hydroxy-4,5-dimethyl-1,3-phenylene)bis(methylene)]bis[6-hydroxy-2,5-dimethyl- (9CI) (CA INDEX NAME)



RN 190321-11-0 HCAPLUS

CN Benzenemethanol, 3,3'-[(2-hydroxy-4,5-dimethyl-1,3-phenylene)bis(methylene)]bis[6-hydroxy-5-methyl- (9CI) (CA INDEX NAME)

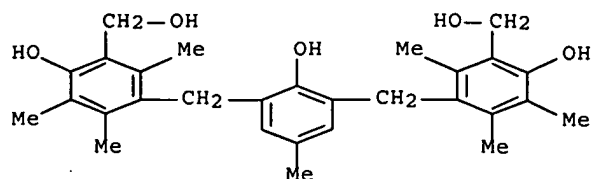


RN 190321-12-1 HCAPLUS

CN Benzenemethanol, 3,3'-[(2-hydroxy-5-methyl-1,3-

10/562,361

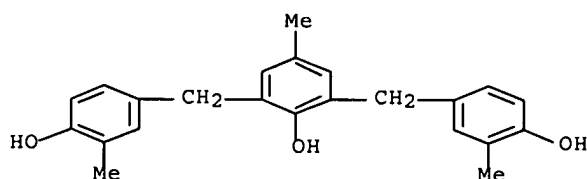
phenylene)bis(methylene)]bis[6-hydroxy-2,4,5-trimethyl- (9CI) (CA  
INDEX NAME)



IT 115052-64-7, 2,6-Bis(4-hydroxy-3-methylbenzyl)-4-methylphenol  
148398-19-0 155643-85-9, 2,6-Bis(4-hydroxy-2,5,6-  
trimethylbenzyl)-4-methylphenol 169340-20-9,  
2,6-Bis(4-hydroxy-3-methylbenzyl)-3,4-dimethylphenol  
(preparation of quinone diazide photosensitizers and pos. resist  
compns.)

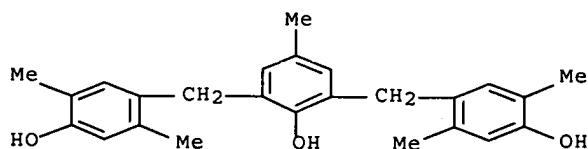
RN 115052-64-7 HCAPLUS

CN Phenol, 2,6-bis[(4-hydroxy-3-methylphenyl)methyl]-4-methyl- (CA INDEX  
NAME)



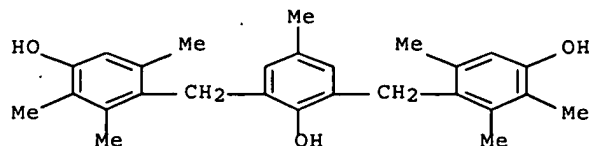
RN 148398-19-0 HCAPLUS

CN Phenol, 2,6-bis[(4-hydroxy-2,5-dimethylphenyl)methyl]-4-methyl- (CA  
INDEX NAME)

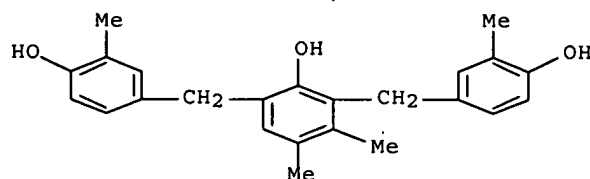


RN 155643-85-9 HCAPLUS

CN Phenol, 2,6-bis[(4-hydroxy-2,3,6-trimethylphenyl)methyl]-4-methyl-  
(CA INDEX NAME)



RN 169340-20-9 HCAPLUS  
 CN Phenol, 2,6-bis[(4-hydroxy-3-methylphenyl)methyl]-3,4-dimethyl- (CA  
 INDEX NAME)



IC ICM C07C039-15  
 ICS C07C309-71; C07C309-76; G03F007-022  
 CC 41-11 (Dyes, Organic Pigments, Fluorescent Brighteners, and  
 Photographic Sensitizers)  
 Section cross-reference(s): 25, 74, 76  
 IT 10496-93-2P, 4-(Hydroxymethyl)-2,5-dimethylphenol 20837-68-7P  
 22247-58-1P 67730-48-7P 145668-05-9P 167687-31-2P 167687-35-6P  
 170446-63-6P 182318-74-7P 189957-63-9P  
 189957-68-4P 190320-83-3P 190320-84-4P 190320-85-5P  
 190320-86-6P 190320-87-7P 190320-88-8P 190320-89-9P  
 190320-90-2P 190320-91-3P 190320-92-4P 190320-93-5P  
 190320-94-6P 190320-95-7P 190320-96-8P 190320-97-9P  
 190320-98-0P 190320-99-1P 190321-00-7P 190321-01-8P  
 190321-02-9P 190321-03-0P 190321-04-1P 190321-05-2P  
 190321-06-3P 190321-07-4P, 2,6-Bis(4-hydroxy-2,5-  
 dimethylbenzyl)-3,4-dimethylphenol 190321-08-5P,  
 2,6-Bis[4-hydroxy-3-(hydroxymethyl)-2,5-dimethylbenzyl]-3,4-  
 dimethylphenol 190321-09-6P 190321-10-9P 190321-11-0P  
 190321-12-1P 190321-13-2P 190321-14-3P  
 (preparation of quinone diazide photosensitizers and pos. resist  
 compns.)  
 IT 50-00-0, Formaldehyde, reactions 95-48-7, o-Cresol, reactions  
 95-65-8, 3,4-Xylenol 95-87-4, 2,5-Xylenol 106-44-5, p-Cresol,  
 reactions 127-54-8, 2,2-Bis(4-hydroxy-3-isopropylphenyl)propane  
 697-82-5, 2,3,5-Trimethylphenol 2362-14-3, 4,4'-Cyclohexylidenebis(o-  
 cresol) 3770-97-6, 1,2-Naphthoquinonediazide-5-sulfonyl chloride  
 4754-63-6, Bis-OC-AP 6641-13-0 28139-72-2, Bis-OC-P  
 115052-64-7, 2,6-Bis(4-hydroxy-3-methylbenzyl)-4-methylphenol  
 148398-19-0 155643-85-9, 2,6-Bis(4-hydroxy-2,5,6-  
 trimethylbenzyl)-4-methylphenol 156938-17-9 169340-20-9,  
 2,6-Bis(4-hydroxy-3-methylbenzyl)-3,4-dimethylphenol 169397-50-6,  
 2,4-Bis[4-hydroxy-2,5-dimethylbenzyl]-3,6-dimethylphenol  
 169397-52-8, 2,4-Bis[4-hydroxy-3-methylbenzyl]-3,6-dimethylphenol  
 185067-49-6  
 (preparation of quinone diazide photosensitizers and pos. resist

compns.)

L50 ANSWER 25 OF 32 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1996:641043 HCAPLUS Full-text

DOCUMENT NUMBER: 125:312504

ORIGINAL REFERENCE NO.: 125:58231a,58234a

TITLE: Positive-working photoresist composition

INVENTOR(S): Sato, Kenichiro; Kodama, Kunihiko; Shirakawa, Koji; Sakaguchi, Shinji

PATENT ASSIGNEE(S): Fuji Photo Film Co Ltd, Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 15 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

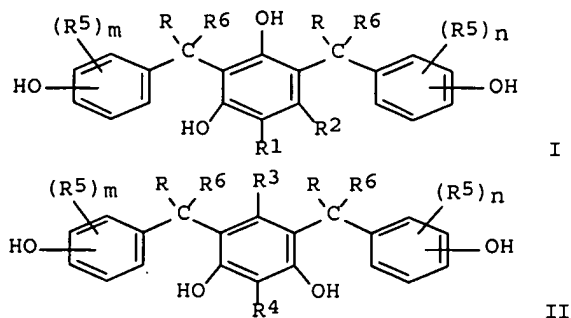
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 08202031	A	19960809	JP 1995-7570	19950120
PRIORITY APPLN. INFO.:			JP 1995-7570	19950120

OTHER SOURCE(S): MARPAT 125:312504

ED Entered STN: 30 Oct 1996

GI



AB The composition comprises an alkali soluble resin and  $\geq 1$  1,2-naphthoquinonediazide sulfonic acid ester of polyhydric compds. I or II (R1-4 = H, halo, alkyl; R5 = H, halo, alkyl, alkoxy, acyl, cycloalkyl, aryl; R, R6 = H, alkyl; when R = R6 = H, R1  $\neq$  R4  $\neq$  H). The composition shows high sensitivity and wide development latitude.

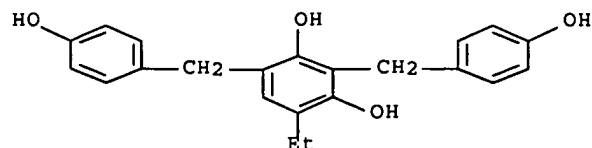
IT 182412-02-8P 182412-04-0P 182412-05-1P

(esterification with naphthoquinonediazidesulfonyl chloride)

RN 182412-02-8 HCAPLUS

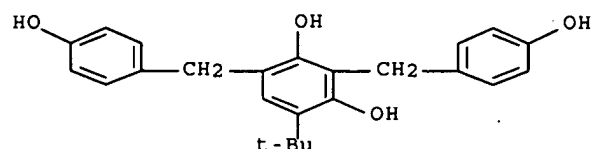
CN 1,3-Benzenediol, 4-ethyl-2,6-bis[(4-hydroxyphenyl)methyl]- (CA INDEX NAME)

10/562,361



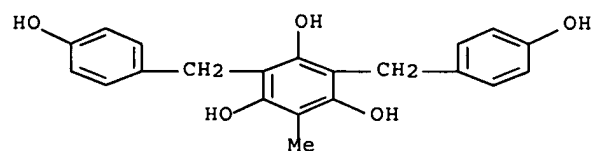
RN 182412-04-0 HCAPLUS

CN 1,3-Benzenediol, 4-(1,1-dimethylethyl)-2,6-bis[(4-hydroxyphenyl)methyl]- (CA INDEX NAME)



RN 182412-05-1 HCAPLUS

CN 1,3,5-Benzenetriol, 2,4-bis[(4-hydroxyphenyl)methyl]-6-methyl- (CA INDEX NAME)

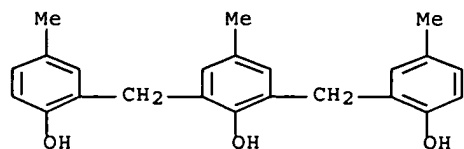


IT 1620-68-4

(photoresist composition containing polyhydric compound)

RN 1620-68-4 HCAPLUS

CN Phenol, 2,6-bis[(2-hydroxy-5-methylphenyl)methyl]-4-methyl- (CA INDEX NAME)



IC ICM G03F007-022

ICS G03F007-023; H01L021-027

CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
Section cross-reference(s): 37

10/562,361

IT 182412-02-8P 182412-04-0P 182412-05-1P  
(esterification with naphthoquinonediazidesulfonyl chloride)  
IT 603-44-1, Tris(4-hydroxyphenyl)methane 843-55-0,  
1,1-Bis(4-hydroxyphenyl)cyclohexane 1620-68-4 129348-96-5  
172683-89-5  
(photoresist composition containing polyhydric compound)

L50 ANSWER 26 OF 32 HCAPLUS COPYRIGHT 2008 ACS on STN  
ACCESSION NUMBER: 1996:494695 HCAPLUS Full-text  
DOCUMENT NUMBER: 125:234415  
ORIGINAL REFERENCE NO.: 125:43567a,43570a  
TITLE: o-quinonediazidesulfonic acid ester of phenolic  
compound for positive photoresist  
INVENTOR(S): Blakeney, Andrew J.; Medina, Arturo N.; Toukhy,  
Medhat A.; Ferreira, Lawrence; Tadros, Sobhy  
PATENT ASSIGNEE(S): Ocg Microelectronic Materials, Inc., USA  
SOURCE: U.S., 23 pp.  
CODEN: USXXAM  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5541033	A	19960730	US 1995-384501	19950201
US 5547814	A	19960820	US 1995-451599	19950526
US 5602260	A	19970211	US 1995-451939	19950526
EP 725053	A1	19960807	EP 1996-300364	19960118
EP 725053	B1	20000405		
R: BE, DE, FR, GB, IE, IT, NL				
EP 840170	A1	19980506	EP 1998-100123	19960118
EP 840170	B1	20000405		
R: BE, DE, FR, GB, IT, NL, IE				
JP 08245463	A	19960924	JP 1996-35738	19960131
KR 203228	B1	19990615	KR 1996-2403	19960201
PRIORITY APPLN. INFO.:			US 1995-384501	A3 19950201
			EP 1996-300364	A3 19960118

OTHER SOURCE(S): MARPAT 125:234415  
ED Entered STN: 20 Aug 1996  
GI

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

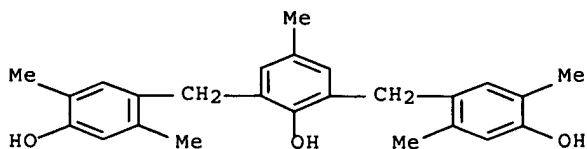
AB The title ester is represented by the formula I or II (R1, R2, R12, R12 = H, OD, halogen, C1-4 alkyl, a C1-4 alkyl ether group, or a C1-4 alkyl thioether group; R3-10, R13, R14 = H, halogen, C1-4 alkyl, a C1-4 alkyl ether group, or a C1-4 alkyl thioether group; x, y = an integer of 0, 1-4; Ra-d = H or C1-4 alkyl; v, w = 0 or 1 with the sum of v and w being 1 or 2; A, B = O, S, or methylene; OD = OH or an o-quinonediazidesulfonic acid ester group wherein D is selected from naphthoquinonediazidesulfonyl and benzonaphthoquinonediazidesulfonyl groups, provided that at least one OD is an o-quinonediazidesulfonic acid ester group) and a process for forming patterned image using a pos. photoresist containing the title ester is also disclosed.  
IT 148398-19-0P

10/562,361

(preparation and reaction in preparing phenolic compound  
quinonediazidesulfonates for photoresists)

RN 148398-19-0 HCAPLUS

CN Phenol, 2,6-bis[(4-hydroxy-2,5-dimethylphenyl)methyl]-4-methyl- (CA  
INDEX NAME)

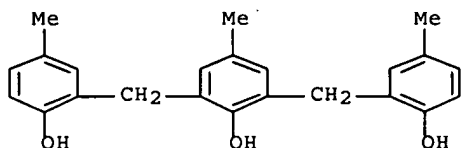


IT 1620-68-4

(speed enhancer for pos. photoresists containing phenolic compound  
quinonediazidesulfonates)

RN 1620-68-4 HCAPLUS

CN Phenol, 2,6-bis[(2-hydroxy-5-methylphenyl)methyl]-4-methyl- (CA INDEX  
NAME)



IC ICM G03F007-023

INCL 430192000

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic  
and Other Reprographic Processes)

IT 2092-49-1P 3626-48-0P 148398-19-0P 181622-03-7P

181622-05-9P 181622-07-1P 181622-24-2P 181622-27-5P

181622-29-7P 181622-31-1P

(preparation and reaction in preparing phenolic compound  
quinonediazidesulfonates for photoresists)

IT 843-55-0, 4,4'-Cyclohexylidenebisphenol 1620-68-4

110726-28-8

(speed enhancer for pos. photoresists containing phenolic compound  
quinonediazidesulfonates)

L50 ANSWER 27 OF 32 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1996:391663 HCAPLUS Full-text

DOCUMENT NUMBER: 125:100153

ORIGINAL REFERENCE NO.: 125:18554h,18555a

TITLE: Positive photoresist composition

INVENTOR(S): Shirakawa, Koji; Sato, Kenichiro; Kodama,  
Kunihiko; Kawabe, Yasumasa; Sakuguchi, Shinji

PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan

SOURCE: Eur. Pat. Appl., 33 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: English



FAMILY ACC. NUM. COUNT: 1

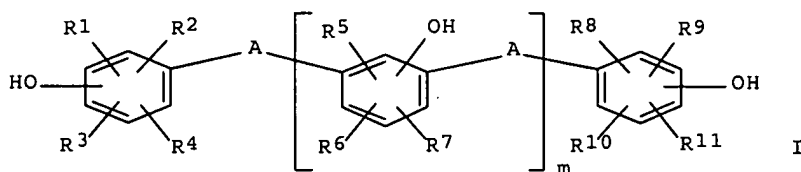
## PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 710886	A1	19960508	EP 1995-117085	19951030
EP 710886	B1	19990721		
R: BE, DE				
JP 08129255	A	19960521	JP 1994-267491	19941031
JP 3278306	B2	20020430		
US 5629128	A	19970513	US 1995-531081	19950920
PRIORITY APPLN. INFO.:			JP 1994-267491	A 19941031

OTHER SOURCE(S): MARPAT 125:100153

ED Entered STN: 09 Jul 1996

GI



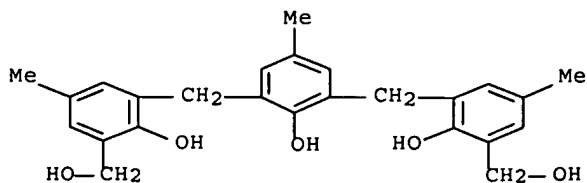
AB A pos. photoresist composition is described, which comprises an alkali-soluble resin and 1,2-naphthoquinonodiazido-5-(and/or -4-)sulfonate of a polyhydroxy compound represented by the formula I wherein R1 to R11 are the same of different and each represents a hydrogen atom, a halogen atom, an alkyl group, an aryl group, an alkoxy group, an acyl group, or a cycloalkyl group, provided that at least one of R1 to R11 is a cycloalkyl group; A represents -CH(R12)-, in which R12 represents a hydrogen atom or an alkyl group; m represents 2 or 3.

IT 22247-59-2P 115052-64-7P 170446-63-6P

(preparation and reaction in preparing photosensitive esters for pos. photoresist compns.)

RN 22247-59-2 HCAPLUS

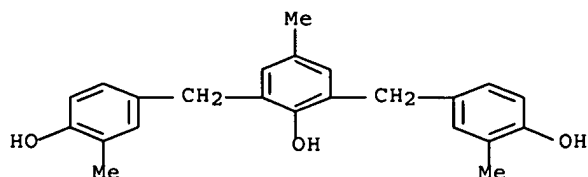
CN Benzenemethanol, 3,3'-[(2-hydroxy-5-methyl-1,3-phenylene)bis(methylene)]bis[2-hydroxy-5-methyl- (CA INDEX NAME)



RN 115052-64-7 HCAPLUS

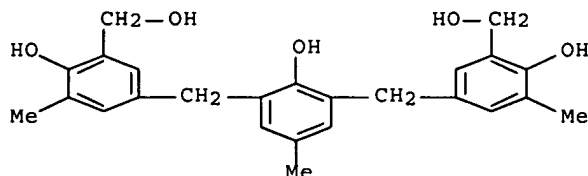
10/562,361

CN Phenol, 2,6-bis[(4-hydroxy-3-methylphenyl)methyl]-4-methyl- (CA INDEX NAME)



RN 170446-63-6 HCAPLUS

CN Benzenemethanol, 3,3'-[(2-hydroxy-5-methyl-1,3-phenylene)bis(methylene)]bis[6-hydroxy-5-methyl- (9CI) (CA INDEX NAME)



IC ICM G03F007-022

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

IT 6641-13-0P 22247-59-2P 115052-64-7P 123766-40-5P

170446-63-6P 170636-11-0P 178206-72-9P 178206-73-0P

178206-74-1P 178206-75-2P 178206-76-3P 178206-77-4P

178206-78-5P 178206-79-6P 178206-80-9P 178206-81-0P

(preparation and reaction in preparing photosensitive esters for pos. photoresist comps.)

L50 ANSWER 28 OF 32 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1995:838766 HCAPLUS Full-text

DOCUMENT NUMBER: 124:71607

ORIGINAL REFERENCE NO.: 124:13133a,13136a

TITLE: Positive-working photoresist compositions using specific quinonediazide compound

INVENTOR(S): Aoso, Toshiaki; Kawabe, Yasumasa; Sakaguchi, Shinji

PATENT ASSIGNEE(S): Fuji Photo Film Co Ltd, Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 18 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 07159989	A	19950623	JP 1993-310613	19931210

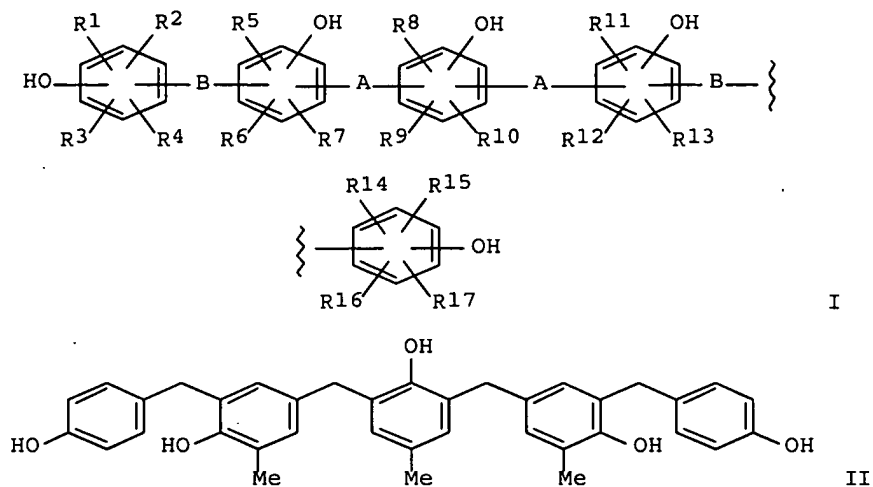
10/562,361

JP 3429039  
PRIORITY APPLN. INFO.:

B2 20030722

JP 1993-310613

19931210

ED Entered STN: 07 Oct 1995  
GI

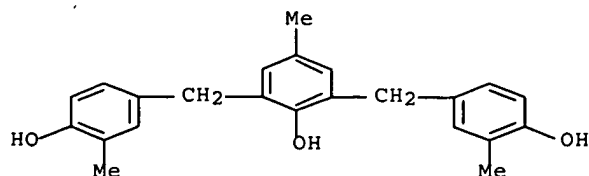
AB The title photoresist compns. contain an alkali-soluble resin and 1,2-naphthoquinonediazido-5- (and/or 4-)sulfonate of a polyhydric compound I [R1-17 = H, halo, alkyl, aryl, alkoxy, acyloxy, acyl, alkenyl, aralkyl, OH; A, B = O, S, CO, CS, SO, SO<sub>2</sub>, SO<sub>3</sub>, CO<sub>2</sub>, CONH, SO<sub>2</sub>NH, CR<sub>18</sub>R<sub>19</sub> (R<sub>18</sub>, R<sub>19</sub> = H, halo, alkyl, aryl, alkoxy, R<sub>18</sub> and R<sub>19</sub> may form a ring)]. The compns. provide high-resolution patterns regardless of thickness and show good developability and development latitude. Thus, a photoresist comprised m-cresol-p-cresol-HCHO novolak resin and 1,2-naphthoquinonediazido-5-sulfonate of II was prepared

IT 115052-64-7P

(preparation of polyhydric compound)

RN 115052-64-7 HCAPLUS

CN Phenol, 2,6-bis[(4-hydroxy-3-methylphenyl)methyl]-4-methyl- (CA INDEX NAME)

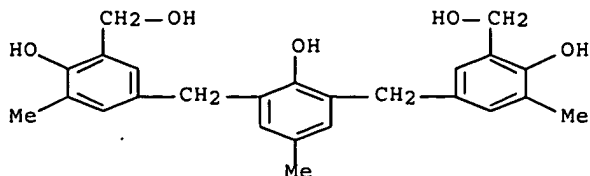


IT 170446-63-6

(preparation of polyhydric compound)

10/562,361

RN 170446-63-6 HCAPLUS  
CN Benzenemethanol, 3,3'-[(2-hydroxy-5-methyl-1,3-phenylene)bis(methylene)]bis[6-hydroxy-5-methyl- (9CI) (CA INDEX NAME)



IC ICM G03F007-022  
ICS H01L021-027  
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
IT 115052-64-7P  
(preparation of polyhydric compound)  
IT 50-00-0, Formaldehyde, reactions 91-04-3, 2,6-Bis(hydroxymethyl)-p-cresol 95-48-7, o-Cresol, reactions 108-95-2, Phenol, reactions 2467-25-6 7451-94-7, 4,6-Bis(hydroxymethyl)-2-methylphenol 170446-63-6  
(preparation of polyhydric compound)

L50 ANSWER 29 OF 32 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1993:581871 HCAPLUS Full-text

DOCUMENT NUMBER: 119:181871

ORIGINAL REFERENCE NO.: 119:32527a,32530a

TITLE: Synthesis and characterization of condensed trimers from cresols and p-chlorophenol

AUTHOR(S): Sauer, E.; Schopf, G.; Polz, K.; Bendig, J.

CORPORATE SOURCE: Dep. Chem., Humboldt-Univ., Berlin, O-1040, Germany

SOURCE: Journal fuer Praktische Chemie/Chemiker-Zeitung (1993), 335(2), 185-9  
CODEN: JPCCEM; ISSN: 0941-1216

DOCUMENT TYPE: Journal

LANGUAGE: English

ED Entered STN: 30 Oct 1993

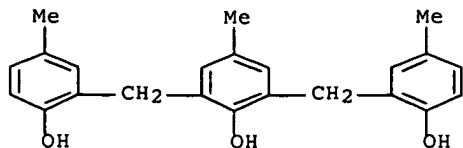
AB A systematic synthesis of phenolic trimers used as oligomeric resins in photolithog. is possible. The percentage of byproducts was determined by gel permeation chromatog. and 1H-NMR spectroscopy. The byproduct content could be kept low (≤12%) by an improved and reproducible synthetic technique described in this paper. Some selected properties of the products and potentialities and limits of anal. investigation are discussed.

IT 1620-68-4P 66232-87-9P 100267-42-3P  
(preparation of, for photoresists)

RN 1620-68-4 HCAPLUS

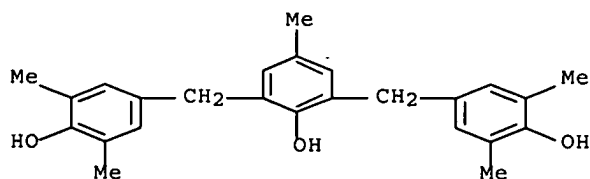
CN Phenol, 2,6-bis[(2-hydroxy-5-methylphenyl)methyl]-4-methyl- (CA INDEX NAME)

10/562,361



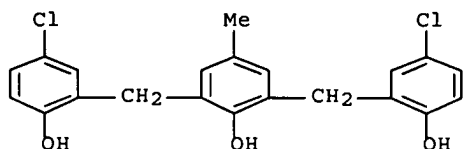
RN 66232-87-9 HCAPLUS

CN Phenol, 2,6-bis[(4-hydroxy-3,5-dimethylphenyl)methyl]-4-methyl- (CA INDEX NAME)



RN 100267-42-3 HCAPLUS

CN Phenol, 2,6-bis[(5-chloro-2-hydroxyphenyl)methyl]-4-methyl- (CA INDEX NAME)



CC 37-3 (Plastics Manufacture and Processing)

Section cross-reference(s): 74

IT 1620-68-4P 66232-87-9P 100267-42-3P

124331-96-0P 145612-75-5P 145612-77-7P 148780-12-5P

148780-13-6P 148780-14-7P

(preparation of, for photoresists)

L50 ANSWER 30 OF 32 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1992:117233 HCAPLUS Full-text

DOCUMENT NUMBER: 116:117233

ORIGINAL REFERENCE NO.: 116:19627a,19630a

TITLE: Selected block copolymer novolak binder resins and their use in radiation-sensitive compositions for positive photoresists

INVENTOR(S): Jeffries, Alfred J.; Honda, Kenji; Blakeney, Andrew J.; Tadros, Sobhy

PATENT ASSIGNEE(S): Olin Hunt Specialty Products, Inc., USA

SOURCE: PCT Int. Appl., 37 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

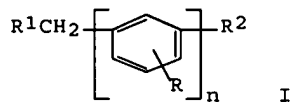
FAMILY ACC. NUM. COUNT: 1

## PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9104512	A1	19910404	WO 1990-US4307	19900802
W: AU, BB, BG, BR, CA, DK, FI, HU, JP, KP, KR, LK, MC, MG, MW, NO, RO, SD, SU				
RW: AT, BE, BF, BJ, CF, CG, CH, CM, DE, DK, ES, FR, GA, GB, IT, LU, ML, MR, NL, SE, SN, TD, TG				
AU 9063533	A	19910418	AU 1990-63533	19900802
US 5188921	A	19930223	US 1991-711351	19910604
US 5235022	A	19930810	US 1992-979889	19921123
US 5234795	A	19930810	US 1992-979890	19921123
PRIORITY APPLN. INFO.:			US 1989-404139	A 19890907
			WO 1990-US4307	A 19900802
			US 1991-711351	A3 19910604

ED Entered STN: 20 Mar 1992

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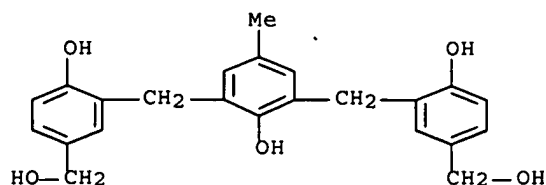
AB The title resins which are especially useful in pos.-working photoresist compns. are composed of the reaction product of a reactive ortho-ortho bonded oligomer of the formula I (R = H, C1-4 lower alkyl, C1-4 lower alkoxy, or halogen; R1 = OH, alkoxy, or halogen; R2 = H, alkyl, alkoxy, halogen, OH, CH2OH, halomethyl, or alkoxyethyl; n = 2-7) and an alkali-soluble phenolic moiety having  $\geq 2$  phenolic nuclei and  $\geq 2$  unsubstituted positions ortho and para to the hydroxyls in the moiety. Thus, a p-cresol trimer (2,6-bis[(2-hydroxy-5-methylphenyl)methyl]-4-methylphenol) was prepared from p-cresol and 2,6-bis(hydroxymethyl)-p-cresol and then reacted with a m-cresol-HCHO copolymer to give a block copolymer novolak. This novolak was then mixed with 2,3,4,4'-tetrahydroxybenzophenone 1,2-naphthoquinone-2-diazide-5-sulfonate to give a photoresist showing excellent photospeed and line-and-space resolution

IT 139197-88-9P

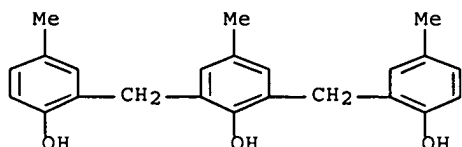
(preparation and polymerization of, for block copolymer novolak binders for pos. photoresists)

RN 139197-88-9 HCAPLUS

CN Benzenemethanol, 3,3'-[(2-hydroxy-5-methyl-1,3-phenylene)bis(methylene)]bis[4-hydroxy- (CA INDEX NAME)



IT 1620-68-4P, 2,6-Bis[(2-hydroxy-5-methylphenyl)methyl]-4-methylphenol  
 (preparation and reaction of, in preparation of block copolymer novolak binders for pos. photoresists)  
 RN 1620-68-4 HCAPLUS  
 CN Phenol, 2,6-bis[(2-hydroxy-5-methylphenyl)methyl]-4-methyl- (CA INDEX NAME)



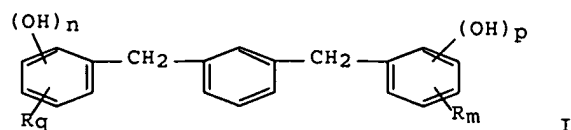
IC ICM G03F007-023  
 CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
 IT 22247-58-1P, 3,3'-Methylenebis[2-hydroxy-5-methylbenzenemethanol]  
 139197-88-9P 139197-92-5P  
 (preparation and polymerization of, for block copolymer novolak binders for pos. photoresists)  
 IT 1620-68-4P, 2,6-Bis[(2-hydroxy-5-methylphenyl)methyl]-4-methylphenol 19480-52-5P, p-Cresol pentamer  
 (preparation and reaction of, in preparation of block copolymer novolak binders for pos. photoresists)

L50 ANSWER 31 OF 32 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1992:48953 HCAPLUS Full-text  
 DOCUMENT NUMBER: 116:48953  
 ORIGINAL REFERENCE NO.: 116:8307a,8310a  
 TITLE: Positive-working photoresist compositions  
 INVENTOR(S): Kataoka, Mutsuo; Oseto, Hiroki; Oshige, Saburo  
 PATENT ASSIGNEE(S): Toray Industries, Inc., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 8 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 03230164	A	19911014	JP 1990-25715	19900205
PRIORITY APPLN. INFO.:			JP 1990-25715	19900205

ED Entered STN: 08 Feb 1992  
GI



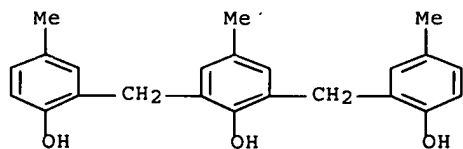
AB The title compns. contain (a) novolak obtained from 20/80 to 80/20 (mol) m-cresol-p-cresol mixture that contain  $\leq 10$  weight% dimer and  $\geq 10$  weight% trimer, and (b) naphthoquinone-1,2-diazide-5-(or 4-) sulfonate ester of tetrahydroxy-, pentahydroxy-, or hexahydroxybenzophenone. The compns. may also contain novolak consisting of novolak mixture containing  $\leq 10$  weight% dimer and  $\leq 5$  weight% trimer, which is added with compds. with novolak trimer structure. The added trimers preferably have structure I ( $p, n = 1, 2$ ;  $m, q = 1-4$ ;  $p+m < 5$ ;  $n+q < 5$ ;  $R =$  lower alkyl, halo, lower alkoxy). Dissoln. rate of the trimer layer in aqueous 2.38%  $\text{Me}_4\text{NOH}$  is preferably  $\geq 200 \text{ \AA/s}$ . The compns. provide high resolution, sensitivity and mask reproducibility, and do not produce scum on development. Thus, a m-cresol-p-cresol novolak was fractionated by precipitation and a fraction containing 6.1 weight% dimer and 3.0 weight% trimer was obtained. A photosensitive composition this fraction and 2,6-bis(2-hydroxy-5-methylphenylmethyl)-4-methylphenol (trimer content of the novolak fraction 12.7 weight%), and diazido ester, showed excellent resolution of  $0.40\text{-}\mu\text{m}$  line-and-space, and high  $\gamma$  value.

IT 1620-68-4 20738-82-3 66232-87-9  
100267-42-3

(photoresists containing cresol novolaks and diazide esters and, dimer and trimer content of, for improved performance)

RN 1620-68-4 HCAPLUS

CN Phenol, 2,6-bis[(2-hydroxy-5-methylphenyl)methyl]-4-methyl- (CA INDEX NAME)

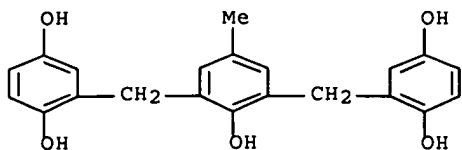


RN 20738-82-3 HCAPLUS

CN 1,4-Benzenediol, 2,2'-[(2-hydroxy-5-methyl-1,3-phenylene)bis(methylene)]bis- (CA INDEX NAME)

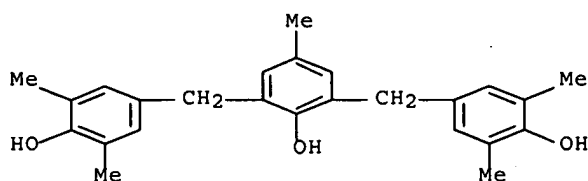


10/562,361



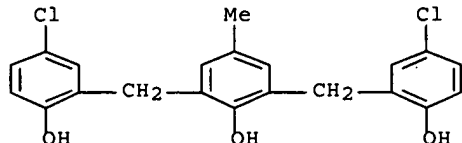
RN 66232-87-9 HCAPLUS

CN Phenol, 2,6-bis[(4-hydroxy-3,5-dimethylphenyl)methyl]-4-methyl- (CA INDEX NAME)



RN 100267-42-3 HCAPLUS

CN Phenol, 2,6-bis[(5-chloro-2-hydroxyphenyl)methyl]-4-methyl- (CA INDEX NAME)



IC ICM G03F007-023

ICS H01L021-027

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 38

IT 1620-68-4 20738-82-3 66232-87-9

100267-42-3

(photoresists containing cresol novolaks and diazide esters and, dimer and trimer content of, for improved performance)

L50 ANSWER 32 OF 32 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1990:27933 HCAPLUS Full-text

DOCUMENT NUMBER: 112:27933

ORIGINAL REFERENCE NO.: 112:4713a,4716a

TITLE: Photoactive compound structure and resist function: the influence of chromophore proximity  
AUTHOR(S): Szmanda, Charles R.; Zampini, Anthony; Madoux, David C.; McCrants, Clayton L.

CORPORATE SOURCE: Shipley Co., Inc., Newton, MA, 02162, USA

SOURCE: Proceedings of SPIE-The International Society for Optical Engineering (1989), 1086(Adv. Resist

Technol. Process. 6), 363-73  
 CODEN: PSISDG; ISSN: 0277-786X

DOCUMENT TYPE:

Journal

LANGUAGE:

English

ED Entered STN: 21 Jan 1990

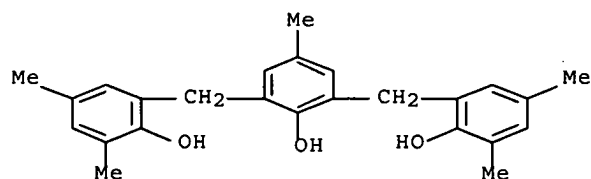
AB The influence of structure of photoactive compound (PAC) was determined by examining the dissoln. characteristics of various exptl. photoresists. The PACs in these materials have structures in which the PAC chromophores are deployed at low and high d. but otherwise have the same functionality, with 3 diazoquinone (DAQ) moieties per PAC mol. The studies indicate that the greatest degree of dissoln. inhibition is obtained when the DAQ groups are spread broadly across the same mol. Furthermore, those PACs which showed the strongest inhibition in unexposed and lightly exposed resists exhibited the least dissoln. rate enhancement in exposed resists. Resists made with PACs whose DAQ moieties are widely separated exhibit an extraordinary supralinear relation between the dissoln. rate and the exposure energy. Energy reaction orders for these materials have values much greater than the expected value of 3 predicted by polyphotolysis theory. A possible mechanism for this phenomenon is proposed. In addition, the lithog. implications of the dissoln. characteristics of these exptl. resists are discussed as they relate to resist optimization.

IT 35924-04-0 66232-87-9

(chromophore proximity effect in photoresist containing photoactive compound of)

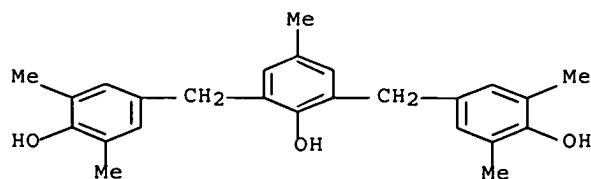
RN 35924-04-0 HCAPLUS

CN Phenol, 2,6-bis[(2-hydroxy-3,5-dimethylphenyl)methyl]-4-methyl- (CA INDEX NAME)



RN 66232-87-9 HCAPLUS

CN Phenol, 2,6-bis[(4-hydroxy-3,5-dimethylphenyl)methyl]-4-methyl- (CA INDEX NAME)



CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

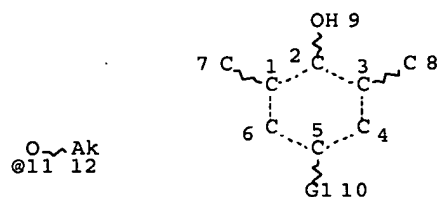
IT 5610-94-6 35924-04-0 66232-87-9

(chromophore proximity effect in photoresist containing photoactive compound of)

10/562,361

=&gt; d que 151

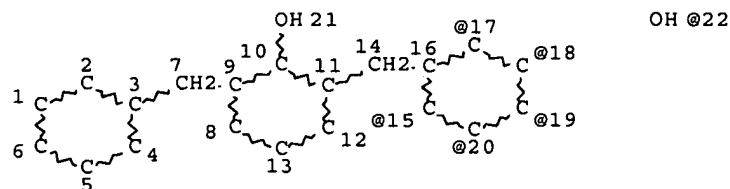
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/BI OR 317804-55-0/BI OR 54845-41-9/BI OR 56272-52-7/BI)  
L11 SCR 1918  
L13 STR



VAR G1=AK/CB/X/11  
NODE ATTRIBUTES:  
CONNECT IS E2 RC AT 7  
CONNECT IS E2 RC AT 8  
DEFAULT MLEVEL IS ATOM  
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:  
RSPEC I  
NUMBER OF NODES IS 12

STEREO ATTRIBUTES: NONE  
L15 SCR 1992  
L17 3232 SEA FILE=REGISTRY SSS FUL L13 NOT (L11 OR L15)  
L18 3 SEA FILE=REGISTRY ABB=ON PLU=ON L17 AND L2  
L19 2 SEA FILE=REGISTRY ABB=ON PLU=ON L2 NOT L18  
L20 1 SEA FILE=REGISTRY ABB=ON PLU=ON L19 NOT MAN/CI  
L21 STR



VPA 22-17/18/19/20/15 U  
NODE ATTRIBUTES:  
DEFAULT MLEVEL IS ATOM  
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:  
RING(S) ARE ISOLATED OR EMBEDDED  
NUMBER OF NODES IS 22

STEREO ATTRIBUTES: NONE  
L24 1044 SEA FILE=REGISTRY SUB=L17 SSS FUL L21  
L25 424 SEA FILE=REGISTRY ABB=ON PLU=ON L24 AND 3/NR

10/562,361

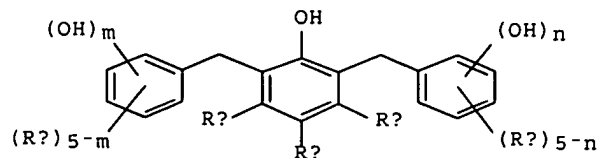
L28 100 SEA FILE=REGISTRY ABB=ON PLU=ON L25 AND 4-HYDROXY?/CNS  
 L29 324 SEA FILE=REGISTRY ABB=ON PLU=ON L25 NOT L28  
 L30 9433 SEA FILE=REGISTRY ABB=ON PLU=ON 108-95-2/CRN  
 L32 186 SEA FILE=HCAPLUS ABB=ON PLU=ON L28  
 L33 715 SEA FILE=HCAPLUS ABB=ON PLU=ON L29  
 L34 66 SEA FILE=HCAPLUS ABB=ON PLU=ON L32 AND L33  
 L35 4775 SEA FILE=HCAPLUS ABB=ON PLU=ON L17  
 L36 35397 SEA FILE=HCAPLUS ABB=ON PLU=ON L30  
 L37 147 SEA FILE=HCAPLUS ABB=ON PLU=ON L35 AND L36  
 L39 80249 SEA FILE=HCAPLUS ABB=ON PLU=ON L20  
 L40 306 SEA FILE=HCAPLUS ABB=ON PLU=ON L35 AND L39  
 L42 32 SEA FILE=HCAPLUS ABB=ON PLU=ON L34 AND PHOTOG?/SC,SX  
 L43 35 SEA FILE=HCAPLUS ABB=ON PLU=ON L37 AND PHOTOG?/SC,SX  
 L44 41 SEA FILE=HCAPLUS ABB=ON PLU=ON L40 AND PHOTOG?/SC,SX  
 L45 75 SEA FILE=HCAPLUS ABB=ON PLU=ON L43 OR L44  
 L48 30 SEA FILE=HCAPLUS ABB=ON PLU=ON L45 AND (RECORD? OR  
 PRINT?)  
 L49 2 SEA FILE=HCAPLUS ABB=ON PLU=ON L42 AND L48  
 L50 32 SEA FILE=HCAPLUS ABB=ON PLU=ON L42 OR L49  
 L51 28 SEA FILE=HCAPLUS ABB=ON PLU=ON L48 NOT L50

=> d l51 1-28 ibib ed abs hitstr hitind

L51 ANSWER 1 OF 28 HCAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 2006:677734 HCAPLUS Full-text  
 DOCUMENT NUMBER: 145:113470  
 TITLE: Thermal printing material containing  
 phenol condensate color developer  
 INVENTOR(S): Kobayashi, Hiroshi; Kabashima, Kazuo  
 PATENT ASSIGNEE(S): Asahi Kasei Chemicals Corporation, Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 30 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

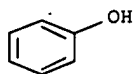
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2006181858	A	20060713	JP 2004-377581	20041227
PRIORITY APPLN. INFO.:			JP 2004-377581	20041227

OTHER SOURCE(S): MARPAT 145:113470  
 ED Entered STN: 13 Jul 2006  
 GI

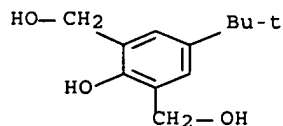


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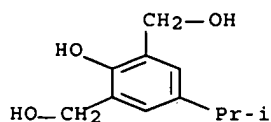
- AB The material comprises a support successively coated with an intermediate layer and a coloring layer containing a color developer I with three phenol rings [Ra = C1-18 alkyl, C5-10 cycloalkyl, C1-4 alkoxy, halo, C7-14 aralkyl or aryl; Rb = H, C1-4 alkyl, C1-4 alkoxy, halo; Rc = H, halo, cyano, C1-18 alkyl, C5-10 cycloalkyl, C1-4 alkoxy, C7-14 aralkyl or aryl; m, n = 1-5], a part of I satisfying that (A)  $\geq 1$  of 4- or 4'- position of the both sides rings is substituted with OH and (B)  $\geq 1$  group adjacent to the OH is H. The material shows high sensitivity and gives clear image with good storage stability under high temperature and moisture conditions.
- IT 108-95-2D, Phenol, reaction products with dihydroxymethylphenol derivative 2203-14-7D, 2,6-Dihydroxymethyl-4-tert-butylphenol, reaction products with phenol 54845-41-9D, reaction products with phenol 172210-41-2 (color developer; thermal printing material having intermediate layer and heat-sensitive layer containing phenol condensate color developer)
- RN 108-95-2 HCAPLUS
- CN Phenol (CA INDEX NAME)



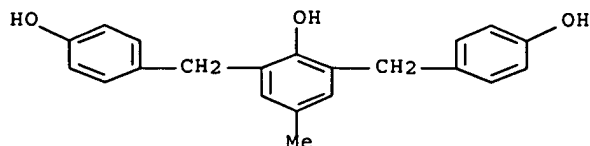
- RN 2203-14-7 HCAPLUS
- CN 1,3-Benzenedimethanol, 5-(1,1-dimethylethyl)-2-hydroxy- (CA INDEX NAME)



- RN 54845-41-9 HCAPLUS
- CN 1,3-Benzenedimethanol, 2-hydroxy-5-(1-methylethyl)- (CA INDEX NAME)



- RN 172210-41-2 HCAPLUS
- CN Phenol, 2,6-bis[(4-hydroxyphenyl)methyl]-4-methyl- (CA INDEX NAME)



- CC 74-7 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
- ST thermal printing material intermediate layer; phenol condensate color developer thermal printing material
- IT Clays, uses  
(calcined, intermediate layer containing; thermal printing material having intermediate layer and heat-sensitive layer containing phenol condensate color developer)
- IT Thermal printing materials  
(thermal printing material having intermediate layer and heat-sensitive layer containing phenol condensate color developer)
- IT Acrylic polymers, uses  
(with styrene, intermediate layer containing; thermal printing material having intermediate layer and heat-sensitive layer containing phenol condensate color developer)
- IT 108-95-2D, Phenol, reaction products with dihydroxymethylphenol derivative 2203-14-7D, 2,6-Dihydroxymethyl-4-tert-butylphenol, reaction products with phenol 54845-41-9D, reaction products with phenol 172210-41-2  
(color developer; thermal printing material having intermediate layer and heat-sensitive layer containing phenol condensate color developer)
- IT 79-10-7D, Acrylic acid, esters, polymers with styrene 100-42-5D, Styrene, copolymers with acrylic acid ester 9002-89-5, Poly(vinyl alcohol) 9003-53-6, Polystyrene 9003-55-8, Styrene-butadiene copolymer 9011-14-7, Poly(methyl methacrylate) 21645-51-2, Aluminum hydroxide, uses  
(intermediate layer containing; thermal printing material having intermediate layer and heat-sensitive layer containing phenol condensate color developer)

L51 ANSWER 2 OF 28 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2006:677663 HCAPLUS Full-text

DOCUMENT NUMBER: 145:113469

TITLE: Heat-sensitive composition containing phenol condensate color developer and heat-melttable compound for thermal printing material

INVENTOR(S): Kobayashi, Hiroshi; Kabashima, Kazuo

PATENT ASSIGNEE(S): Asahi Kasei Chemicals Corporation, Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 27 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

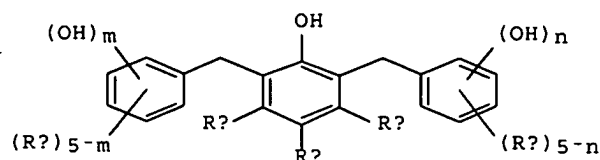
FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 2006181857	A	20060713	JP 2004-377580	20041227
PRIORITY APPLN. INFO.:			JP 2004-377580	20041227

10/562,361

OTHER SOURCE(S): MARPAT 145:113469  
 ED Entered STN: 13 Jul 2006  
 GI

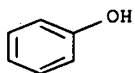


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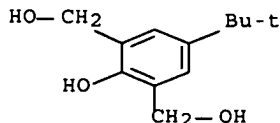
AB The composition contains a heat meltable compound with 60-180° m.p. and color developer I with three phenol rings [Ra = C1-18 alkyl, C5-10 cycloalkyl, C1-4 alkoxy, halo, C7-14 aralkyl or aryl; Rb = H, C1-4 alkyl, C1-4 alkoxy, halo; Rc = H, halo, cyano, C1-18 alkyl, C5-10 cycloalkyl, C1-4 alkoxy, C7-14 aralkyl or aryl; m, n = 1-5], a part of I satisfying that (A) ≥1 of 4- or 4'- position of the both sides rings is substituted with OH and (B) ≥1 group adjacent to the OH is H. Printing material comprises a support coated with the composition. The material shows high sensitivity and gives clear images with good storage stability under high humidity conditions.

IT 108-95-2DP, Phenol, reaction products with dihydroxymethylphenol derivative 2203-14-7DP, 2,6-Dihydroxymethyl-4-tert-butylphenol, reaction products with phenol 54845-41-9DP, reaction products with phenol (color developer; thermal printing material containing phenol condensate color developer and heat-meltable compound)

RN 108-95-2 HCAPLUS  
 CN Phenol (CA INDEX NAME)

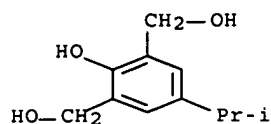


RN 2203-14-7 HCAPLUS  
 CN 1,3-Benzenedimethanol, 5-(1,1-dimethylethyl)-2-hydroxy- (CA INDEX NAME)



RN 54845-41-9 HCAPLUS  
 CN 1,3-Benzenedimethanol, 2-hydroxy-5-(1-methylethyl)- (CA INDEX NAME)



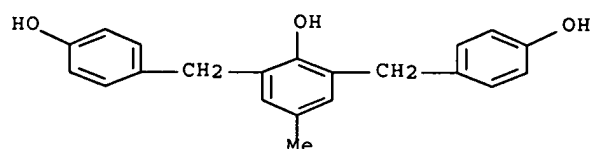


IT 172210-41-2

(color developer; thermal printing material containing phenol condensate color developer and heat-meltable compound)

RN 172210-41-2 HCAPLUS

CN Phenol, 2,6-bis[(4-hydroxyphenyl)methyl]-4-methyl- (CA INDEX NAME)



CC 74-7 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

ST phenol condensate color developer thermal printing material; heat meltable compd thermal printing material

IT 108-95-2DP, Phenol, reaction products with dihydroxymethylphenol derivative 2203-14-7DP, 2,6-Dihydroxymethyl-4-tert-butylphenol, reaction products with phenol 54845-41-9DP, reaction products with phenol

(color developer; thermal printing material containing phenol condensate color developer and heat-meltable compound)

IT 172210-41-2

(color developer; thermal printing material containing phenol condensate color developer and heat-meltable compound)

IT 92-06-8, 1,1':3',1''-Terphenyl 94-18-8, Benzyl 4-hydroxybenzoate 104-66-5, 1,2-Diphenoxyethane 120-61-6, Dimethyl terephthalate 124-26-5, Stearic acid amide 127-63-9, Diphenyl sulfone 613-42-3, p-Benzylbiphenyl 613-62-7,  $\beta$ -Naphthylbenzyl ether 7579-36-4, Dibenzyl oxalate 10403-74-4, 1,2-Diphenoxymethylbenzene 18241-31-1, HS 3520 19829-42-6, Oxalic acid di(p-chlorobenzyl) ester 19851-61-7, Dibenzyl terephthalate 34101-86-5, 1,2-Bis(3,4-dimethylphenyl)ethane 54914-85-1

(heat-meltable compound; thermal printing material containing phenol condensate color developer and heat-meltable compound)

L51 ANSWER 3 OF 28 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2006:677647 HCAPLUS Full-text

DOCUMENT NUMBER: 145:113468

TITLE: Thermal printing material containing pulverized phenol condensate color developer

INVENTOR(S): Kobayashi, Hiroshi; Kabashima, Kazuo

PATENT ASSIGNEE(S): Asahi Kasei Chemicals Corporation, Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 27 pp.

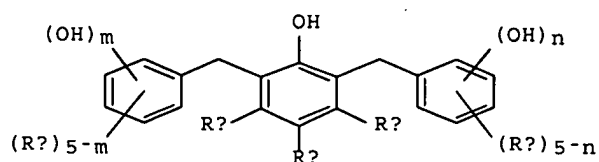
CODEN: JKXXAF

10/562,361

DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2006181856	A	20060713	JP 2004-377579	20041227
PRIORITY APPLN. INFO.:			JP 2004-377579	20041227

OTHER SOURCE(S): MARPAT 145:113468  
 ED Entered STN: 13 Jul 2006  
 GI

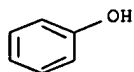


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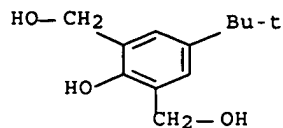
AB The material contains pulverized color developer (average particle size 0.05-5  $\mu$ m) I with three phenol rings [Ra = C1-18 alkyl, C5-10 cycloalkyl, C1-4 alkoxy, halo, C7-14 aralkyl or aryl; Rb = H, C1-4 alkyl, C1-4 alkoxy, halo; Rc = H, halo, cyano, C1-18 alkyl, C5-10 cycloalkyl, C1-4 alkoxy, C7-14 aralkyl or aryl; m, n = 1-5], a part of I satisfying that (A)  $\geq 1$  of 4- or 4'- position of the both sides rings is substituted with OH and (B)  $\geq 1$  group adjacent to the OH is H. Thermal printing material is manufactured by coating the heat-sensitive layer at pH 5-12. The material shows high sensitivity, gives clear images without background fog and showing good storage stability and moisture resistance.

IT 108-95-2DP, Phenol, reaction products with dihydroxymethylphenol derivative 2203-14-7DP, 2,6-Dihydroxymethyl-4-tert-butylphenol, reaction products with phenol 54845-41-9DP, reaction products with phenol (color developer; thermal printing material containing phenol condensate color developer)

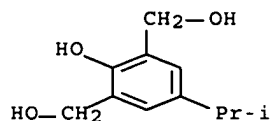
RN 108-95-2 HCAPLUS  
 CN Phenol (CA INDEX NAME)



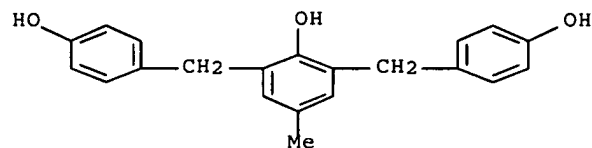
RN 2203-14-7 HCAPLUS  
 CN 1,3-Benzenedimethanol, 5-(1,1-dimethylethyl)-2-hydroxy- (CA INDEX NAME)



RN 54845-41-9 HCAPLUS  
 CN 1,3-Benzenedimethanol, 2-hydroxy-5-(1-methylethyl)- (CA INDEX NAME)



IT 172210-41-2  
 (color developer; thermal printing material containing phenol  
 condensate color developer)  
 RN 172210-41-2 HCAPLUS  
 CN Phenol, 2,6-bis[(4-hydroxyphenyl)methyl]-4-methyl- (CA INDEX NAME)



CC 74-7 (Radiation Chemistry, Photochemistry, and Photographic  
 and Other Reprographic Processes)  
 ST thermal printing material pulverized color developer; phenol  
 condensate color developer thermal printing  
 IT Thermal printing materials  
 (thermal printing material containing phenol condensate color  
 developer)  
 IT 108-95-2DP, Phenol, reaction products with  
 dihydroxymethylphenol derivative 2203-14-7DP,  
 2,6-Dihydroxymethyl-4-tert-butylphenol, reaction products with phenol  
 54845-41-9DP, reaction products with phenol  
 (color developer; thermal printing material containing phenol  
 condensate color developer)  
 IT 172210-41-2  
 (color developer; thermal printing material containing phenol  
 condensate color developer)

L51 ANSWER 4 OF 28 HCAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 2006:677630 HCAPLUS Full-text  
 DOCUMENT NUMBER: 145:113467

10/562,361

TITLE: Coloring composition containing phenol derivative  
color developer and fluoran compound  
INVENTOR(S): Kobayashi, Hiroshi; Kabashima, Kazuo  
PATENT ASSIGNEE(S): Asahi Kasei Chemicals Corporation, Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 23 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2006181855	A	20060713	JP 2004-377578	20041227
PRIORITY APPLN. INFO.:			JP 2004-377578	20041227

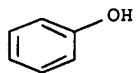
OTHER SOURCE(S): MARPAT 145:113467  
ED Entered STN: 13 Jul 2006  
GI

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

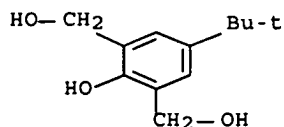
AB The composition contains fluoran compound I [Y1-2 = C2-8 alkyl or aralkyl  $\geq 1$  of Y1-2 has C4-8 ] and a color developer II with three phenol rings (Ra = C1-18 alkyl, C5-10 cycloalkyl, C1-4 alkoxy, halo, C7-14 aralkyl or aryl; Rb = H, C1-4 alkyl, C1-4 alkoxy, halo; Rc = H, halo, cyano, C1-18 alkyl, C5-10 cycloalkyl, C1-4 alkoxy, C7-14 aralkyl or aryl; m, n = 1-5], in which a part of II satisfies (A)  $\geq 1$  of 4- or 4'- position of the both sides rings is substituted with OH and (B)  $\geq 1$  group adjacent to the OH is H. Printing material contains the composition The material shows high sensitivity, gives clear images without background fog and showing good storage stability and moisture resistance.

IT 108-95-2DP, Phenol, reaction products with dihydroxymethylphenol derivative 2203-14-7DP, 2,6-Dihydroxymethyl-4-tert-butylphenol, reaction products with phenol 54845-41-9DP, reaction products with phenol (color developer; thermal printing material containing phenol derivative color developer and fluoran compd)

RN 108-95-2 HCAPLUS  
CN Phenol (CA INDEX NAME)

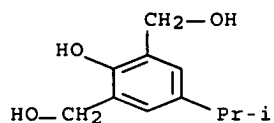


RN 2203-14-7 HCAPLUS  
CN 1,3-Benzenedimethanol, 5-(1,1-dimethylethyl)-2-hydroxy- (CA INDEX NAME)



RN 54845-41-9 HCAPLUS

CN 1,3-Benzenedimethanol, 2-hydroxy-5-(1-methylethyl)- (CA INDEX NAME)

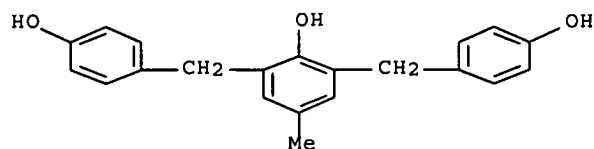


IT 172210-41-2

(color developer; thermal printing material containing phenol derivative color developer and fluoran compd)

RN 172210-41-2 HCAPLUS

CN Phenol, 2,6-bis[(4-hydroxyphenyl)methyl]-4-methyl- (CA INDEX NAME)



CC 74-7 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

ST thermal printing fluoran phenol deriv color developer

IT Thermal printing materials

(thermal printing material containing phenol derivative color developer and fluoran compd)

IT 108-95-2DP, Phenol, reaction products with dihydroxymethylphenol derivative 2203-14-7DP,

2,6-Dihydroxymethyl-4-tert-butylphenol, reaction products with phenol 54845-41-9DP, reaction products with phenol

(color developer; thermal printing material containing phenol derivative color developer and fluoran compd)

IT 172210-41-2

(color developer; thermal printing material containing phenol derivative color developer and fluoran compd)

IT 70516-41-5, 3-(N-Ethyl-N-isoamylamino)-6-methyl-7-anilinofluoran 89331-94-2, 3-Dibutylamino-6-methyl-7-anilinofluoran

(color former; thermal printing material containing phenol derivative color developer and fluoran compd)

L51 ANSWER 5 OF 28 HCAPLUS COPYRIGHT 2008 ACS on STN

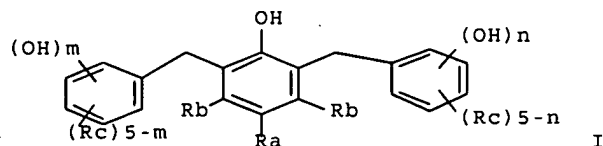
ACCESSION NUMBER: 2005:14318 HCAPLUS Full-text

10/562,361

DOCUMENT NUMBER: 142:103211  
 TITLE: Phenolic color developer for thermal recording materials  
 INVENTOR(S): Takahashi, Hideaki; Tsurugaya, Muneaki; Matsuda, Takayuki  
 PATENT ASSIGNEE(S): Asahi Kasei Chemicals Corporation, Japan  
 SOURCE: PCT Int. Appl., 48 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005000597	A1	20050106	WO 2004-JP8708	20040621
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EP 1637337	A1	20060322	EP 2004-746177	20040621
R: DE, ES, FR, GB, FI				
CN 1812887	A	20060802	CN 2004-80017872	20040621
US 20070099130	A1	20070503	US 2005-562361	20051227
PRIORITY APPLN. INFO.:			JP 2003-180430	A 20030625
			JP 2003-286513	A 20030805
			WO 2004-JP8708	W 20040621

OTHER SOURCE(S): MARPAT 142:103211  
 ED Entered STN: 07 Jan 2005  
 GI



AB The invention relates to a developer which contains a triphenolic compound I (Ra = C1-18 alkyl, C5-10 cycloalkyl, C1-4 alkoxy, etc.; Rb = H, C1-4 alkyl, C1-4 alkoxy, etc.; Rc = H, halo, cyano, etc.; m, n = integer 1-5) which exhibits high sensitivity and shelf stability of images and less fog in non-image areas; and color forming materials and thermal recording materials made by using the same.

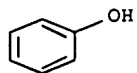
IT 108-95-2DP, Phenol, reaction product with p-substituted phenol

10/562,361

derivative 2203-14-7DP, 2,6-Bis(hydroxymethyl)-4-tert-butylphenol, reaction product with phenol 54845-41-9DP, 2,6-Bis(hydroxymethyl)-4-isopropylphenol, reaction product with phenol 56272-52-7DP, reaction product with phenol (developer for recording materials)

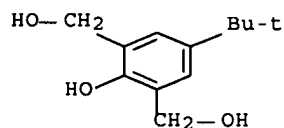
RN 108-95-2 HCAPLUS

CN Phenol (CA INDEX NAME)



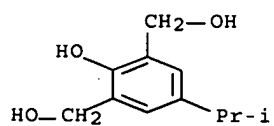
RN 2203-14-7 HCAPLUS

CN 1,3-Benzenedimethanol, 5-(1,1-dimethylethyl)-2-hydroxy- (CA INDEX NAME)



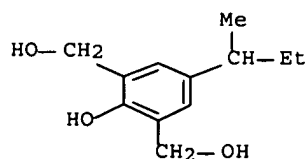
RN 54845-41-9 HCAPLUS

CN 1,3-Benzenedimethanol, 2-hydroxy-5-(1-methylethyl)- (CA INDEX NAME)



RN 56272-52-7 HCAPLUS

CN 1,3-Benzenedimethanol, 2-hydroxy-5-(1-methylpropyl)- (CA INDEX NAME)



IC ICM B41M005-28

ICS B41M005-30; B41M005-34; C09B057-00

CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic

and Other Reprographic Processes)

Section cross-reference(s): 41

ST phenolic developer thermal recording

IT Leuco dyes

Thermal printing materials

(developer for recording materials)

IT Thermal printing materials

(sheets; developer for recording materials)

IT 108-95-2DP, Phenol, reaction product with p-substituted phenol

derivative 2203-14-7DP, 2,6-Bis(hydroxymethyl)-4-tert-

butylphenol, reaction product with phenol 54845-41-9DP,

2,6-Bis(hydroxymethyl)-4-isopropylphenol, reaction product with phenol

56272-52-7DP, reaction product with phenol 317804-55-0P,

Bis-P-CP

(developer for recording materials)

REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR  
THIS RECORD. ALL CITATIONS AVAILABLE IN THE  
RE FORMAT

L51 ANSWER 6 OF 28 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2004:876335 HCAPLUS Full-text

DOCUMENT NUMBER: 141:340477

TITLE: Phenol derivative color developer and thermal  
printing material using it

INVENTOR(S): Yuzuriha, Koji; Arita, Yasushi

PATENT ASSIGNEE(S): Sumitomo Bakelite Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 13 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

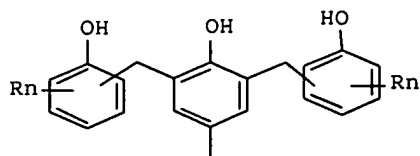
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	-----
JP 2004291552	A	20041021	JP 2003-90016	20030328
PRIORITY APPLN. INFO.:			JP 2003-90016	20030328

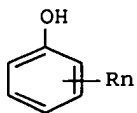
OTHER SOURCE(S): MARPAT 141:340477

ED Entered STN: 22 Oct 2004

GI



I



II

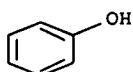


AB The color developer I [R = H, C1-6 alkyl, (substituted) Ph, aralkyl, alkoxy, halo; n = 1-4] is claimed. I is prepared by reacting a phenolic compound II [R = H, C1-6 alkyl, (substituted) Ph, aralkyl, alkoxy, halo; n = 1-4] with 2,6-dimethylol-p-cresol in the presence of an acid catalyst. Thermal printing material using a leuco dye and I as a color developer is also claimed. The material shows high sensitivity, resistance to water and oil, and lightfastness.

IT 108-95-2, Phenol, reactions  
(reaction with dimethylolcresol)

RN 108-95-2 HCAPLUS

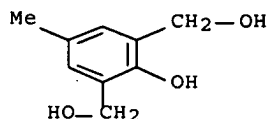
CN Phenol (CA INDEX NAME)



IT 91-04-3, 2,6-Dimethylol-p-cresol  
(reaction with phenol)

RN 91-04-3 HCAPLUS

CN 1,3-Benzenedimethanol, 2-hydroxy-5-methyl- (CA INDEX NAME)



IC ICM B41M005-30  
ICS C07B061-00; C07C037-16; C07C039-15

CC 74-7 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
Section cross-reference(s): 28

ST thermal printing material phenol deriv color developer;  
dimethylolcresol phenol condensate color developer

IT Thermal printing materials  
(thermal printing material containing phenol-dimethylolcresol condensate as color developer)

IT 95-48-7, o-Cresol, reactions 108-95-2, Phenol, reactions  
(reaction with dimethylolcresol)

IT 91-04-3, 2,6-Dimethylol-p-cresol  
(reaction with phenol)

L51 ANSWER 7 OF 28 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2003:809246 HCAPLUS Full-text

DOCUMENT NUMBER: 139:314555

TITLE: Phenolic resin color-developer for thermal printing material

INVENTOR(S): Otsutsumi, Toshihiko

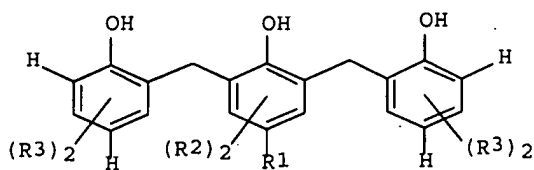
PATENT ASSIGNEE(S): Showa Highpolymer Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp.  
CODEN: JKXXAF

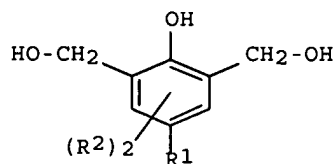
DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2003291541	A	20031015	JP 2002-102814	20020404
JP 3733081	B2	20060111		
JP 2005262886	A	20050929	JP 2005-101704	20050331
PRIORITY APPLN. INFO.:			JP 2002-102814	A3 20020404

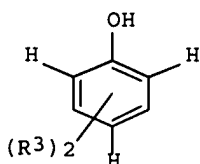
OTHER SOURCE(S): MARPAT 139:314555  
 ED Entered STN: 15 Oct 2003  
 GI



I

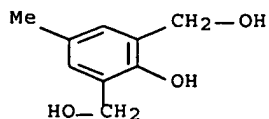


II



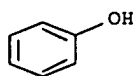
III

- AB The phenolic resin contains 35-85% of trimer I and prepared by reacting 2,6-dimethylol-p-substituted phenol II and a phenol III unsubstituted at o- and p-positions. The phenolic resin is harmless and useful for color developer on thermal printing.
- IT 91-04-3D, 2,6-Dimethylol-p-cresol, reaction products with phenols 108-95-2D, Phenol, reaction products with phenols 3173-26-0D, 2,6-Dimethylol-4-phenylphenol, reaction products with phenols 36461-81-1D, reaction products with phenols 51877-25-9D, reaction products with phenols (phenolic compound color developer for thermal printing material)
- RN 91-04-3 HCAPLUS
- CN 1,3-Benzenedimethanol, 2-hydroxy-5-methyl- (CA INDEX NAME)

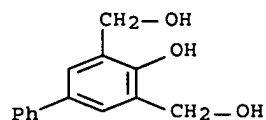


10/562,361

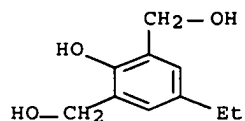
RN 108-95-2 HCAPLUS  
CN Phenol (CA INDEX NAME)



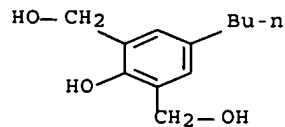
RN 3173-26-0 HCAPLUS  
CN [1,1'-Biphenyl]-3,5-dimethanol, 4-hydroxy- (CA INDEX NAME)



RN 36461-81-1 HCAPLUS  
CN 1,3-Benzenedimethanol, 5-ethyl-2-hydroxy- (CA INDEX NAME)



RN 51877-25-9 HCAPLUS  
CN 1,3-Benzenedimethanol, 5-butyl-2-hydroxy- (CA INDEX NAME)



IC ICM B41M005-30  
ICS C09B057-00; C07C037-16; C07C039-15  
CC 74-7 (Radiation Chemistry, Photochemistry, and Photographic  
and Other Reprographic Processes)  
ST thermal printing material phenol deriv color developer  
IT Thermal printing materials  
(phenolic compound color developer for thermal printing  
material)

10/562,361

IT 91-04-3D, 2,6-Dimethylol-p-cresol, reaction products with phenols 108-39-4D, m-Cresol, reaction products with phenols 108-68-9D, 3,5-Xylenol, reaction products with phenols 108-95-2D, Phenol, reaction products with phenols 620-17-7D, m-Ethylphenol, reaction products with phenols 3173-26-0D, 2,6-Dimethylol-4-phenylphenol, reaction products with phenols 36461-81-1D, reaction products with phenols 51877-25-9D, reaction products with phenols (phenolic compound color developer for thermal printing material)

L51 ANSWER 8 OF 28 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2003:735197 HCAPLUS Full-text

DOCUMENT NUMBER: 139:252548

TITLE: Lithographic printing masters containing storage-stable IR-absorbing dyes

INVENTOR(S): Sasaki, Fumihiko; Nakamura, Ippei; Kato, Eiichi

PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 36 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

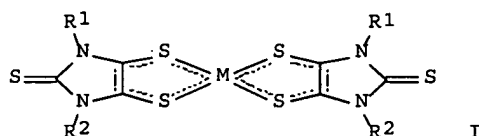
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 2003262953	A	20030919	JP 2002-65780	20020311
PRIORITY APPLN. INFO.:			JP 2002-65780	20020311

OTHER SOURCE(S): MARPAT 139:252548

ED Entered STN: 19 Sep 2003

GI



AB The plates, for computer-to-plate direct platemaking employing IR lasers, contain IR-absorbing dyes I (R1, R2 = aliphatic, aromatic, or heterocyclic group; M = Ni, Pd, Pt) in image-forming layers.

IT 596805-46-8P

(printing layers; lithog. masters containing sp. IR-absorbing dyes of good storage stability and showing improved printing durability)

RN 596805-46-8 HCAPLUS

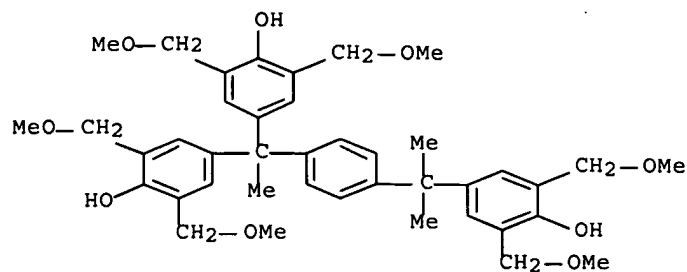
CN Formaldehyde, polymer with 4-[1-[4-[1,1-bis[4-hydroxy-3,5-bis(methoxymethyl)phenyl]ethyl]phenyl]-1-methylethyl]-2,6-bis(methoxymethyl)phenol and phenol (9CI) (CA INDEX NAME)

CM 1

CRN 161679-94-3

10/562,361

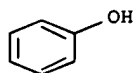
CMF C41 H52 O9



CM 2

CRN 108-95-2

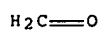
CMF C6 H6 O



CM 3

CRN 50-00-0

CMF C H2 O



- IC ICM G03F007-004
- ICS C09K003-00; G03F007-00
- CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
- Section cross-reference(s): 38
- IT Optical materials
  - (IR absorbers; lithog. masters containing sp. IR-absorbing dyes of good storage stability and showing improved printing durability)
- IT IR materials
  - (absorbers; lithog. masters containing sp. IR-absorbing dyes of good storage stability and showing improved printing durability)
- IT Phenolic resins, preparation
  - (novolak, crosslinked, printing layers; lithog. masters containing sp. IR-absorbing dyes of good storage stability and showing improved printing durability)

- IT Lithographic plates  
(presensitized; lithog. masters containing sp. IR-absorbing dyes of good storage stability and showing improved printing durability)
- IT 161809-01-4 600167-72-4 600167-73-5 600167-74-6 600167-75-7  
600167-76-8 600167-77-9 600167-78-0 600167-80-4 600167-82-6  
600167-84-8 600167-85-9 600167-87-1 600167-92-8 600167-94-0  
600167-96-2 600167-98-4 600168-00-1 600168-02-3 600168-04-5  
600168-06-7 600168-07-8 600168-08-9 600168-09-0  
(IR-absorbing dyes; lithog. masters containing sp. IR-absorbing dyes of good storage stability and showing improved printing durability)
- IT 479640-98-7P  
(microcapsule shell; lithog. masters containing sp. IR-absorbing dyes of good storage stability and showing improved printing durability)
- IT 30528-89-3, Allyl methacrylate-butyl methacrylate copolymer  
(microencapsulated, printing layers; lithog. masters containing sp. IR-absorbing dyes of good storage stability and showing improved printing durability)
- IT 27029-76-1P, m-Cresol-p-cresol-formaldehyde copolymer 121436-62-2P, Allyl methacrylate-dipentaerythritol hexaacrylate-methacrylic acid copolymer 596805-46-8P  
(printing layers; lithog. masters containing sp. IR-absorbing dyes of good storage stability and showing improved printing durability)
- IT 211308-93-9  
(printing layers; lithog. masters containing sp. IR-absorbing dyes of good storage stability and showing improved printing durability)

L51 ANSWER 9 OF 28 HCAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 2002:636849 HCAPLUS Full-text  
 DOCUMENT NUMBER: 137:192781  
 TITLE: Positive working lithographic direct  
 printing plate for infrared laser  
 exposure, containing novolak type phenolic resin  
 INVENTOR(S): Nakamura, Ippei  
 PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 24 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2002236353	A	20020823	JP 2001-32720	20010208
PRIORITY APPLN. INFO.:			JP 2001-32720	20010208

- ED Entered STN: 23 Aug 2002
- AB The material has a recording layer containing (1) a water insol. and alkali soluble novolak type phenolic resin containing methylene linkage  $\geq 55\%$  to total one at an ortho-ortho site to a phenolic OH and (2) an IR absorber. The layer increases solubility to an alkaline aqueous solution by IR laser exposure. The material showed improved image formation latitude on development, contrast, and abrasion resistance.
- IT 449759-94-8P, 2,6-Bis(2-hydroxy-5-methylphenylmethyl)-4-methylphenol-m-cresol-p-cresol-formaldehyde copolymer

10/562,361

449759-96-0P, 2,6-Bis(2-hydroxy-5-methylphenylmethyl)-4-methylphenol-m-cresol-formaldehyde-phenol copolymer

449759-98-2P, 2,6-Bis(2-hydroxy-5-fluorophenylmethyl)-4-fluorophenol-m-cresol-formaldehyde copolymer

(pos.-working lithog. plate containing IR absorbent and phenol novolak resin with ortho methylene linkage)

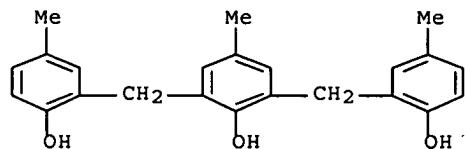
RN 449759-94-8 HCAPLUS

CN Formaldehyde, polymer with 2,6-bis[(2-hydroxy-5-methylphenyl)methyl]-4-methylphenol, 3-methylphenol and 4-methylphenol (9CI) (CA INDEX NAME)

CM 1

CRN 1620-68-4

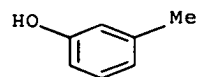
CMF C23 H24 O3



CM 2

CRN 108-39-4

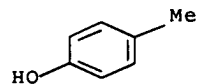
CMF C7 H8 O



CM 3

CRN 106-44-5

CMF C7 H8 O

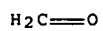


CM 4

CRN 50-00-0

CMF C H2 O

10/562,361



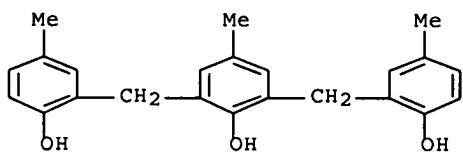
RN 449759-96-0 HCAPLUS

CN Formaldehyde, polymer with 2,6-bis[(2-hydroxy-5-methylphenyl)methyl]-4-methylphenol, 3-methylphenol and phenol (9CI) (CA INDEX NAME)

CM 1

CRN 1620-68-4

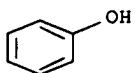
CMF C23 H24 O3



CM 2

CRN 108-95-2

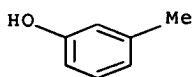
CMF C6 H6 O



CM 3

CRN 108-39-4

CMF C7 H8 O



CM 4

CRN 50-00-0

CMF C H2 O



10/562,361

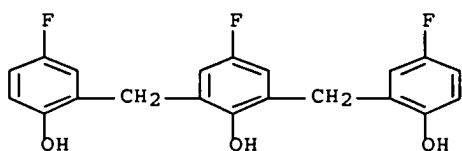
$\text{H}_2\text{C}=\text{O}$

RN 449759-98-2 HCAPLUS  
CN Formaldehyde, polymer with 4-fluoro-2,6-bis[(5-fluoro-2-hydroxyphenyl)methyl]phenol and 3-methylphenol (9CI) (CA INDEX NAME)

CM 1

CRN 71643-02-2

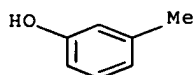
CMF C20 H15 F3 O3



CM 2

CRN 108-39-4

CMF C7 H8 O



CM 3

CRN 50-00-0

CMF C H2 O

$\text{H}_2\text{C}=\text{O}$

IC ICM G03F007-00  
ICS G03F007-032  
CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
Section cross-reference(s): 38  
IT 449759-91-5P, m-Cresol-2,2'-dihydroxy-5,5'-dimethyldiphenylmethane-formaldehyde copolymer 449759-94-8P, 2,6-Bis(2-hydroxy-5-methylphenylmethyl)-4-methylphenol-m-cresol-p-cresol-formaldehyde

10/562,361

copolymer 449759-96-0P, 2,6-Bis(2-hydroxy-5-methylphenylmethyl)-4-methylphenol-m-cresol-formaldehyde-phenol  
copolymer 449759-98-2P, 2,6-Bis(2-hydroxy-5-fluorophenylmethyl)-4-fluorophenol-m-cresol-formaldehyde copolymer  
(pos.-working lithog. plate containing IR absorbent and phenol novolak resin with ortho methylene linkage)

L51 ANSWER 10 OF 28 HCAPLUS COPYRIGHT 2008 ACS on STN  
ACCESSION NUMBER: 2001:77983 HCAPLUS Full-text  
DOCUMENT NUMBER: 134:139240  
TITLE: Heat- and photo-sensitive image forming materials  
useful for computer-aided printing plate  
making process and method for forming thereof  
INVENTOR(S): Kunita, Kazuto  
PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan  
SOURCE: Eur. Pat. Appl., 47 pp.  
CODEN: EPXXDW  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1072432	A2	20010131	EP 2000-113120	20000628
EP 1072432	A3	20030305		
EP 1072432	B1	20050126		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
JP 2001042541	A	20010216	JP 1999-212453	19990727
AT 287798	T	20050215	AT 2000-113120	20000628
US 6670098	B1	20031230	US 2000-614114	20000711
PRIORITY APPLN. INFO.:			JP 1999-212453	A 19990727

ED Entered STN: 02 Feb 2001

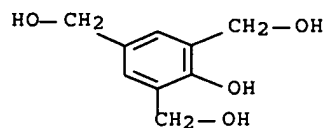
AB The materials have a support having thereon a recording layer which is formed of a composition whose solubility in water or in an alkali aqueous solution is altered by the effects of light or heat, and an intermediate layer which is disposed between the support and the recording layer and which has the same function as that of the recording layer and whose sensitivity to light or heat is higher than that of the recording layer. Thus, under coating a 10 g/m<sup>2</sup> layer of  $\beta$ -alanine on the surface of a degreased, etched and anodically oxidized Al plate, coating on top with a solution containing resol resin (Mw 5000) 0.8, m-cresol-formaldehyde-p- octylphenol novolak 1.5, acid generating naphthalene-1-sulfonium salt (I) 0.20, an IR absorbent compound 0.30, Megafac F 177 (F-containing surfactant) 0.06, MEK 10.0,  $\gamma$ -butyrolactone 10.0 and 1-methoxy-2-propanol 7.0 g to dry pickup weight 0.5 g/m<sup>2</sup>, drying, covering on very top with a solution containing resol resin (Mw 3000) 0.8, formaldehyde-phenol novolak 1.5, I 0.20, an IR absorbent 0.15, a coloring agent 0.015, Megafac F 177 0.06, EtOAc 15.0 and MeOH 5.0 g to total coating pickup weight 2.0 g/m<sup>2</sup> gave a neg. recording plate with good coated layer adhesion, storage stability and photo-sensitivity.

IT 2937-61-3, 2,4,6-Trimethylolphenol 51877-25-9  
322406-72-4

(crosslinkers; heat- and photo-sensitive image forming materials  
useful for computer-aided printing plate making process  
and method for forming thereof)

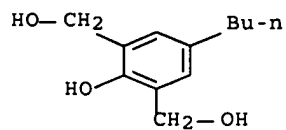
RN 2937-61-3 HCAPLUS

CN 1,3,5-Benzenetrimethanol, 2-hydroxy- (CA INDEX NAME)



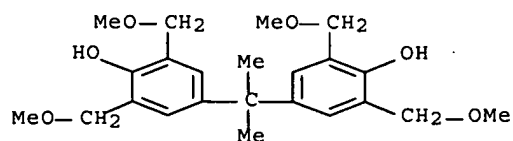
RN 51877-25-9 HCAPLUS

CN 1,3-Benzenedimethanol, 5-butyl-2-hydroxy- (CA INDEX NAME)



RN 322406-72-4 HCAPLUS

CN Phenol, 4,4'-(1-methylethylidene)bis[2,6-bis(methoxymethyl)- (CA INDEX NAME)



IT 9003-35-4, Formaldehyde-phenol copolymer  
(novolak; heat- and photo-sensitive image forming materials useful  
for computer-aided printing plate making process and  
method for forming thereof)

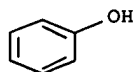
RN 9003-35-4 HCAPLUS

CN Phenol, polymer with formaldehyde (CA INDEX NAME)

CM 1

CRN 108-95-2

CMF C6 H6 O



CM 2

CRN 50-00-0  
CMF C H2 O

H<sub>2</sub>C=O

- IC ICM B41M005-36
- ICS B41C001-10
- CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
- ST computer aided plate formation photo sensitive coating;  
printing plate formation photo sensitive coating
- IT Optical materials  
(IR absorbers; heat- and photo-sensitive image forming materials useful for computer-aided printing plate making process and method for forming thereof)
- IT IR materials  
(absorbers; heat- and photo-sensitive image forming materials useful for computer-aided printing plate making process and method for forming thereof)
- IT Photoresists  
Printing plates  
(heat- and photo-sensitive image forming materials useful for computer-aided printing plate making process and method for forming thereof)
- IT Phenolic resins, properties  
(novolak; novolak; heat- and photo-sensitive image forming materials useful for computer-aided printing plate making process and method for forming thereof)
- IT Phenolic resins, properties  
(novolak; heat- and photo-sensitive image forming materials useful for computer-aided printing plate making process and method for forming thereof)
- IT Phenolic resins, properties  
(resol, coatings; heat- and photo-sensitive image forming materials useful for computer-aided printing plate making process and method for forming thereof)
- IT 115840-01-2 201024-57-9 322406-70-2 322406-77-9 322406-78-0  
(IR absorbents; heat- and photo-sensitive image forming materials useful for computer-aided printing plate making process and method for forming thereof)
- IT 85-47-2D, 1-Naphthalenesulfonic acid, derivative 322406-74-6  
(acid generating agents; heat- and photo-sensitive image forming materials useful for computer-aided printing plate making process and method for forming thereof)
- IT 85-42-7, Hexahydrophthalic anhydride 104-15-4, -p-Toluenesulfonic acid, uses  
(additive; heat- and photo-sensitive image forming materials useful for computer-aided printing plate making process and method for forming thereof)
- IT 2628-17-3D, p-Hydroxystyrene, polymers 24979-71-3,  
p-Hydroxystyrene-methyl methacrylate copolymer 25053-98-9,  
m-Cresol-formaldehyde-3,5-xyleneol copolymer 25086-36-6,  
m-Cresol-formaldehyde copolymer 27029-76-1, m-Cresol-p-cresol-formaldehyde copolymer 56592-54-2 62814-37-3 200628-49-5,  
2-(p-Hydroxyphenyl)ethyl methacrylate homopolymer 322406-71-3,

10/562,361

N-(p-Hydroxyphenyl)methacrylamide-2-(p-hydroxyphenyl)ethyl  
methacrylate copolymer 322406-75-7, o-Cresol-N-(3-  
hydroxyphenyl)acetamide copolymer

(binder resin; heat- and photo-sensitive image forming materials  
useful for computer-aided printing plate making process  
and method for forming thereof)

IT 2937-61-3, 2,4,6-Trimethylolphenol 51877-25-9  
259527-87-2 322406-72-4 322406-73-5

(crosslinkers; heat- and photo-sensitive image forming materials  
useful for computer-aided printing plate making process  
and method for forming thereof)

IT 9003-35-4, Formaldehyde-phenol copolymer 87622-05-7,  
m-Cresol-formaldehyde-p-tert-octylphenol copolymer

(novolak; heat- and photo-sensitive image forming materials useful  
for computer-aided printing plate making process and  
method for forming thereof)

IT 7429-90-5, Aluminum, processes

(printing plate; heat- and photo-sensitive image forming  
materials useful for computer-aided printing plate making  
process and method for forming thereof)

L51 ANSWER 11 OF 28 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2000:863743 HCAPLUS Full-text

DOCUMENT NUMBER: 134:35063

TITLE: Negative-working IR-sensitive material for direct  
printing platemaking

INVENTOR(S): Nakamura, Ippei

PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 29 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 2

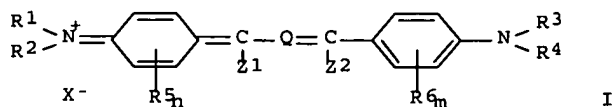
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2000338651	A	20001208	JP 1999-151412	19990531
EP 1059164	A2	20001213	EP 2000-111011	20000530
EP 1059164	A3	20010404		
EP 1059164	B1	20060419		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, CY				
US 6383714	B1	20020507	US 2000-580525	20000530
AT 323602	T	20060515	AT 2000-111011	20000530
PRIORITY APPLN. INFO.:			JP 1999-151412	A 19990531
			JP 1999-157987	A 19990604

OTHER SOURCE(S): MARPAT 134:35063

ED Entered STN: 11 Dec 2000

GI

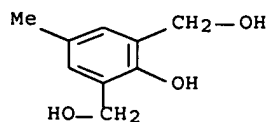


AB The title IR-sensitive material comprises (a) photo- or thermal-acid generator, (b) acid-activatable crosslinking agent, (c) water-insol., alkaline-soluble polymer, and (d) IR-absorbing agent represented by general formula I (R1-4 = H, alkyl, aryl; R5, R6 = alkyl, substituted oxy, halo; n, m = 0-4; Z1, Z2 = H, alkyl, aryl; Q = trimethine, pentamethine; X- = counter anion).

IT 91-04-3 161679-94-3  
(crosslinking agent in neg.-working IR-sensitive material)

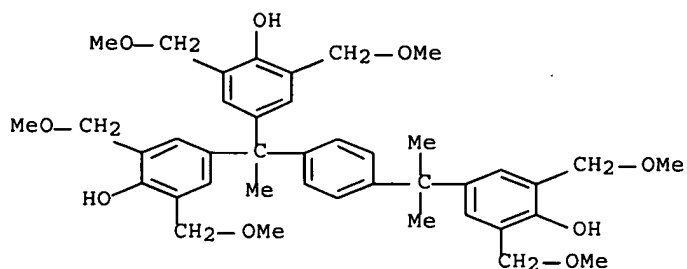
RN 91-04-3 HCAPLUS

CN 1,3-Benzenedimethanol, 2-hydroxy-5-methyl- (CA INDEX NAME)



RN 161679-94-3 HCAPLUS

CN Phenol, 4,4'-[1-[4-[1-[4-hydroxy-3,5-bis(methoxymethyl)phenyl]-1-methylethyl]phenyl]ethylidene]bis[2,6-bis(methoxymethyl)- (CA INDEX NAME)



IT 9003-35-4, Phenol-formaldehyde copolymer  
(water-insol., alkaline-soluble polymer in neg.-working IR-sensitive material)

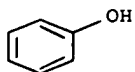
RN 9003-35-4 HCAPLUS

CN Phenol, polymer with formaldehyde (CA INDEX NAME)

CM 1

CRN 108-95-2

CMF C6 H6 O



CM 2

CRN 50-00-0

CMF C H2 O

 $\text{H}_2\text{C}=\text{O}$ 

IC ICM G03F007-00  
 ICS B41N001-14; C08K005-13; C08K005-19; C08L101-12; G03F007-004  
 CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic  
 and Other Reprographic Processes)  
 ST neg working IR sensitive material direct printing  
 platemaking; IR absorbing agent acid generator crosslinking agent  
 IT Dyes  
 (IR-absorbing; in neg.-working IR-sensitive material for direct  
 printing platemaking)  
 IT Lithographic plates  
 (presensitized; neg.-working IR-sensitive material for direct  
 printing platemaking)  
 IT 301193-34-0P 301193-36-2P 301193-38-4P 301193-39-5P  
 (IR-absorbing agent in neg.-working IR-sensitive material for  
 direct printing platemaking)  
 IT 91-04-3 161679-94-3 244057-80-5  
 (crosslinking agent in neg.-working IR-sensitive material)  
 IT 9003-35-4, Phenol-formaldehyde copolymer 24979-70-2, Maruka  
 Lyncur M-S 4P  
 (water-insol., alkaline-soluble polymer in neg.-working IR-sensitive  
 material)

L51 ANSWER 12 OF 28 HCAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 2000:823003 HCAPLUS Full-text  
 DOCUMENT NUMBER: 133:367882  
 TITLE: Manufacture of direct printing plate by  
 infrared laser exposure  
 INVENTOR(S): Kobayashi, Fumikazu  
 PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 56 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	-----
JP 2000321780	A	20001124	JP 1999-126056	19990506
PRIORITY APPLN. INFO.:			JP 1999-126056	19990506

ED Entered STN: 24 Nov 2000

AB The plate, i.e., computer-to-plate (CPT) printing plate, is manufactured by  
 imagewise exposing a neg.-type thermal recording material by a so-called outer  
 drum-type plate setter with 50-100 mW IR laser at 0.5-5 m/s writing speed.  
 The thermal recording material comprises a hydrophilic support having thereon

10/562,361

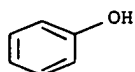
an IR-sensitive layer showing hydrophobicity after exposure and a post processing, which contains (A) a compound generating an acid by decomposition under irradiation or heating, (B) an agent for crosslinking by the acid, (C)  $\geq 1$  alkali-soluble resin, and (D) an IR-absorbing agent. The plate showed improved line and dot reproduction quality.

IT 9003-35-4, Formaldehyde-phenol copolymer  
(alkali-soluble; manufacture of computer-to-print  
printing plate by IR laser irradiation on neg.-type thermal  
recording material)  
RN 9003-35-4 HCAPLUS  
CN Phenol, polymer with formaldehyde (CA INDEX NAME)

CM 1

CRN 108-95-2

CMF C6 H6 O



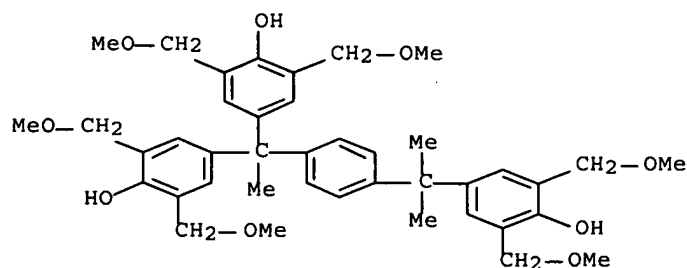
CM 2

CRN 50-00-0

CMF C H2 O

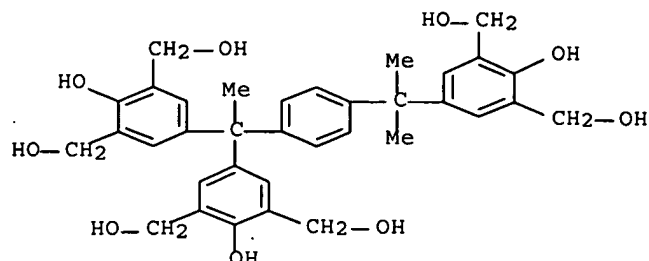


IT 161679-94-3 162846-57-3  
(crosslinking agent; manufacture of computer-to-print  
printing plate by IR laser irradiation on neg.-type thermal  
recording material)  
RN 161679-94-3 HCAPLUS  
CN Phenol, 4,4'-[1-[4-[1-[4-hydroxy-3,5-bis(methoxymethyl)phenyl]-1-methylethyl]phenyl]ethylidene]bis[2,6-bis(methoxymethyl)- (CA INDEX NAME)





RN 162846-57-3 HCAPLUS  
 CN 1,3-Benzenedimethanol, 5,5'-[1-[4-[1-[4-hydroxy-3,5-bis(hydroxymethyl)phenyl]-1-methylethyl]phenyl]ethylidene]bis[2-hydroxy- (CA INDEX NAME)



IC ICM G03F007-20  
 ICS B41C001-055; B41N001-24; G03F007-038  
 CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
 Section cross-reference(s): 38  
 ST direct printing plate IR laser exposure; computer to print printing plate; neg type thermal recording material printing; photodecomposable thermally decomposable acid generating agent; alkali sol resin direct printing plate  
 IT Optical materials  
 Optical materials  
 (IR absorbers; in manufacture of computer-to-print printing plate by IR laser irradiation on neg.-type thermal recording material)  
 IT IR materials  
 IR materials  
 (absorbers; in manufacture of computer-to-print printing plate by IR laser irradiation on neg.-type thermal recording material)  
 IT Phenolic resins, uses  
 (alkali-soluble; manufacture of computer-to-print printing plate by IR laser irradiation on neg.-type thermal recording material)  
 IT Crosslinking agents  
 (in manufacture of computer-to-print printing plate by IR laser irradiation on neg.-type thermal recording material)  
 IT IR lasers  
 Lithographic plates  
 Thermal printing materials  
 (manufacture of computer-to-print printing plate by IR laser irradiation on neg.-type thermal recording material)  
 IT 23178-67-8, NK 2014 134127-48-3  
 (IR absorber; manufacture of computer-to-print printing plate by IR laser irradiation on neg.-type thermal recording material)  
 IT 66003-76-7, Diphenyliodonium trifluoromethanesulfonate 220476-51-7, 2,4,6-Triethoxybenzenediazonium mesitylenesulfonate

10/562,361

(acid-generating agent; manufacture of computer-to-print  
printing plate by IR laser irradiation on neg.-type thermal  
recording material)

- IT 9003-35-4, Formaldehyde-phenol copolymer 24979-70-2,  
Poly(p-hydroxystyrene)  
(alkali-soluble; manufacture of computer-to-print  
printing plate by IR laser irradiation on neg.-type thermal  
recording material)
- IT 161679-94-3 162846-57-3 244057-79-2  
(crosslinking agent; manufacture of computer-to-print  
printing plate by IR laser irradiation on neg.-type thermal  
recording material)

L51 ANSWER 13 OF 28 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2000:686593 HCAPLUS Full-text

DOCUMENT NUMBER: 133:259371

TITLE: Materials for direct IR laser imaging for  
lithographic printing plates

INVENTOR(S): Nakamura, Tatsuo; Kunita, Kazuhito

PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 41 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 2000267265	A	20000929	JP 1999-66733	19990312
JP 4041613	B2	20080130		
PRIORITY APPLN. INFO.:			JP 1999-66733	19990312

ED Entered STN: 29 Sep 2000

AB The materials contain at least (A) IR-absorbing dyes soluble to organic  
solvents and aqueous alkali and (B) polymers insol. to water and soluble to  
aqueous alkali for pos. image formation by IR irradiation Also claimed  
materials contain (A), (B), (C) heat-acid generators, and (D) agents for  
crosslinking by acids for neg. image formation by IR irradiation The  
materials provide high sensitivity and image storage stability.

IT 9003-35-4, Formaldehyde-phenol copolymer  
(IR laser-sensitive image forming material containing dyes and  
alkali-soluble polymers for lithog. printing plates)

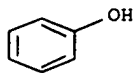
RN 9003-35-4 HCAPLUS

CN Phenol, polymer with formaldehyde (CA INDEX NAME)

CM 1

CRN 108-95-2

CMF C6 H6 O



CM 2

CRN 50-00-0

CMF C H2 O

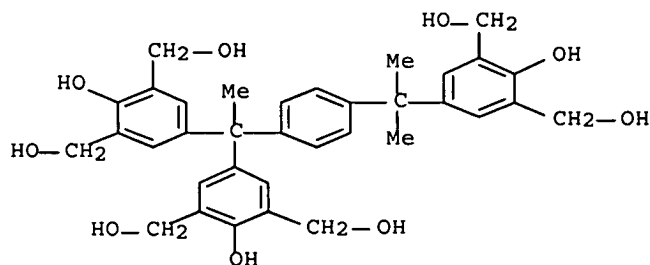
 $\text{H}_2\text{C}=\text{O}$ 

IT 162846-57-3

(crosslinking agent; IR laser-sensitive image forming material containing dyes and alkali-soluble polymers for lithog. printing plates)

RN 162846-57-3 HCAPLUS

CN 1,3-Benzenedimethanol, 5,5'-[1-[4-[1-[4-hydroxy-3,5-bis(hydroxymethyl)phenyl]-1-methylethyl]phenyl]ethylidene]bis[2-hydroxy- (CA INDEX NAME)



IC ICM G03F007-00

ICS B41N001-14; G02B005-20; G03F003-10; G03F007-004

CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

ST IR absorbing dye photoresist image formation lithog printing plate

IT Optical materials

Optical materials

(IR absorbers; IR laser-sensitive image forming material containing dyes and alkali-soluble polymers for lithog. printing plates)

IT Crosslinking agents

Lithographic plates

Negative photoresists

Positive photoresists

(IR laser-sensitive image forming material containing dyes and alkali-soluble polymers for lithog. printing plates)

IT Phenolic resins, uses

(IR laser-sensitive image forming material containing dyes and alkali-soluble polymers for lithog. printing plates)

IT IR materials

IR materials

(absorbers; IR laser-sensitive image forming material containing dyes and alkali-soluble polymers for lithog. printing plates)

IT Phenolic resins, uses

(novolak, cresol-based; IR laser-sensitive image forming material containing dyes and alkali-soluble polymers for lithog. printing plates)

- IT Phenolic resins, uses  
(novolak; IR laser-sensitive image forming material containing dyes and alkali-soluble polymers for lithog. printing plates)
- IT 9003-35-4, Formaldehyde-phenol copolymer 27029-76-1  
124996-93-6, Acrylonitrile-N-(p-aminosulfonylphenyl)methacrylamide-ethyl methacrylate copolymer  
(IR laser-sensitive image forming material containing dyes and alkali-soluble polymers for lithog. printing plates)
- IT 162846-57-3  
(crosslinking agent; IR laser-sensitive image forming material containing dyes and alkali-soluble polymers for lithog. printing plates)
- IT 143557-68-0P 193208-79-6P 296252-23-8P 296252-24-9P  
296252-26-1P 296252-28-3P 296252-30-7P 296252-32-9P  
296252-34-1P 296252-35-2P  
(dye; IR laser-sensitive image forming material containing dyes and alkali-soluble polymers for lithog. printing plates)
- IT 260967-33-7  
(heat-acid generator; IR laser-sensitive image forming material containing dyes and alkali-soluble polymers for lithog. printing plates)
- IT 98-59-9, Tosyl chloride 121-44-8, reactions 123-30-8,  
p-Aminophenol 6761-95-1 63857-00-1 134127-48-3 162411-30-5  
(reaction of; in preparation of IR laser-sensitive dyes for lithog. printing plates)

L51 ANSWER 14 OF 28 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2000:166133 HCAPLUS Full-text

DOCUMENT NUMBER: 132:229527

TITLE: Infrared laser-sensitive image forming material containing ionic dye and lithographic printing plate using it

INVENTOR(S): Nakamura, Tatsuo; Kunida, Kazuto

PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 40 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	-----
JP 2000075474	A	20000314	JP 1998-242195	19980827
PRIORITY APPLN. INFO.:			JP 1998-242195	19980827

ED Entered STN: 14 Mar 2000

AB The image forming material for the lithog. printing plate, contains (a) an ionic dye having cationic and anionic IR-absorbing structure, (b) a polymeric compound which is insol. to water and soluble to alkaline aqueous solution, (c) a compound generating an acid by heat, and (d) a compound crosslinking with an acid catalyst. The material directly provides a printing plate with high sensitivity, improved development latitude, and good storage stability by exposing to IR laser, a thermal head, etc.

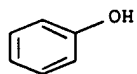
IT 9003-35-4, Phenol-formaldehyde copolymer  
(IR laser-sensitive image forming material containing ionic dye and lithog. printing plate using it)

10/562,361

RN 9003-35-4 HCAPLUS  
CN Phenol, polymer with formaldehyde (CA INDEX NAME)

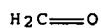
CM 1

CRN 108-95-2  
CMF C6 H6 O



CM 2

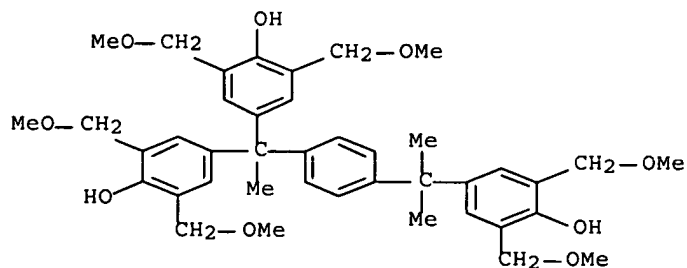
CRN 50-00-0  
CMF C H2 O



IT 161679-94-3  
(crosslinking agent; IR laser-sensitive image forming material containing ionic dye and lithog. printing plate using it)

RN 161679-94-3 HCAPLUS

CN Phenol, 4,4'-[1-[4-[1-[4-hydroxy-3,5-bis(methoxymethyl)phenyl]-1-methylethyl]phenyl]ethylidene]bis[2,6-bis(methoxymethyl)- (CA INDEX NAME)



IC ICM G03F007-004

ICS B41N001-14; G03F007-00; G03F007-038; G03F007-105

CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

ST IR sensitive resist ionic dye lithog plate; printing plate  
lithog IR sensitive resists ionic dye

IT Optical materials

Optical materials

(IR absorbers; IR laser-sensitive image forming material containing

- ionic dye and lithog. printing plate using it)
- IT Lithographic plates  
(IR laser-sensitive image forming material containing ionic dye and lithog. printing plate using it)
- IT Phenolic resins, uses  
(IR laser-sensitive image forming material containing ionic dye and lithog. printing plate using it)
- IT Dyes  
(IR-absorbing; IR laser-sensitive image forming material containing ionic dye and lithog. printing plate using it)
- IT IR materials  
IR materials  
(absorbers; IR laser-sensitive image forming material containing ionic dye and lithog. printing plate using it)
- IT Phenolic resins, uses  
(novolak, cresol-based; IR laser-sensitive image forming material containing ionic dye and lithog. printing plate using it)
- IT 9003-35-4, Phenol-formaldehyde copolymer 27029-76-1, m-Cresol-p-cresol-formaldehyde copolymer  
(IR laser-sensitive image forming material containing ionic dye and lithog. printing plate using it)
- IT 124996-93-6P, Acrylonitrile-N-(p-aminosulfonylphenyl)methacrylamide-ethyl methacrylate copolymer 260967-27-9P 260967-28-0P 260967-29-1P 260967-30-4P 260967-31-5P 260967-32-6P  
(IR laser-sensitive image forming material containing ionic dye and lithog. printing plate using it)
- IT 260967-25-7P 260967-26-8P  
(IR-absorbing dye preparation from; IR laser-sensitive image forming material containing ionic dye and lithog. printing plate using it)
- IT 18300-31-7 22734-61-8, 1H-Benz[f]indene-1,3(2H)-dione 68339-59-3 98826-99-4  
(IR-absorbing dye preparation from; IR laser-sensitive image forming material containing ionic dye and lithog. printing plate using it)
- IT 260967-33-7  
(acid generator; IR laser-sensitive image forming material containing ionic dye and lithog. printing plate using it)
- IT 161679-94-3  
(crosslinking agent; IR laser-sensitive image forming material containing ionic dye and lithog. printing plate using it)

L51 ANSWER 15 OF 28 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2000:144538 HCAPLUS Full-text

DOCUMENT NUMBER: 132:201059

TITLE: Photosensitive resin composition for planographic printing plate preparation

INVENTOR(S): Kunita, Kazuto

PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan

SOURCE: Eur. Pat. Appl., 82 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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EP 982123	A2	20000301	EP 1999-114229	19990727
EP 982123	A3	20000809		

10/562,361

EP 982123 B1 20040721  
 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC,  
 PT, IE, SI, LT, LV, FI, RO  
 JP 2000062338 A 20000229 JP 1998-237752 19980824  
 JP 3660505 B2 20050615  
 JP 2000075485 A 20000314 JP 1998-243478 19980828  
 JP 3836605 B2 20061025  
 EP 1354701 A1 20031022 EP 2003-12286 19990727  
 EP 1354701 B1 20060301  
 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC,  
 PT, IE, FI, CY  
 JP 2006126869 A 20060518 JP 2006-12491 20060120  
 PRIORITY APPLN. INFO.: JP 1998-237752 A 19980824  
 JP 1998-243478 A 19980828  
 EP 1999-114229 A3 19990727

ED Entered STN: 03 Mar 2000

GI For diagram(s), see printed CA Issue.

AB Disclosed is a photosensitive resin composition suited for planog. printing plate preparation comprising a phenolic polymer having on a polymer backbone at least a structural unit represented by the formula I (A = an aromatic hydrocarbon ring which may have a substituent group; R1, R2 = H or a hydrocarbon group having ≤12 C atoms; n = an integer of 1-3; r = an integer chosen in accordance with the mol. weight; X = a divalent linking group; Y = a divalent to quadrivalent linking group having at least one partial structure selected from CO, SO2, PO, C=N, CS, NC=N, NCO, NSO2, NPO, NCS, CO2, SO3, CN, CO2H, and N+ or a terminal group terminated with H; Z = a monovalent to quadrivalent linking group with the proviso that Z is absent when Y is a terminal group or Z is a terminal group when Y is a linking group) and a mol. weight of ≥1000 and an IR ray-absorbing agent.

IT 259527-83-8 259527-85-0

(IR-laser photosensitive resin compns. for planog. printing plate preparation containing)

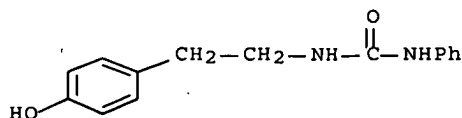
RN 259527-83-8 HCAPLUS

CN Urea, N-[2-(4-hydroxyphenyl)ethyl]-N'-phenyl-, polymer with formaldehyde and phenol (9CI). (CA INDEX NAME)

CM 1

CRN 259527-66-7

CMF C15 H16 N2 O2

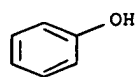


CM 2

CRN 108-95-2

CMF C6 H6 O

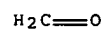
10/562,361



CM 3

CRN 50-00-0

CMF C H2 O



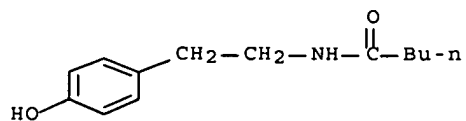
RN 259527-85-0 HCAPLUS

CN Pentanamide, N-[2-(4-hydroxyphenyl)ethyl]-, polymer with formaldehyde and phenol (9CI) (CA INDEX NAME)

CM 1

CRN 259527-84-9

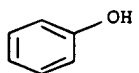
CMF C13 H19 N O2



CM 2

CRN 108-95-2

CMF C6 H6 O



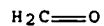
CM 3

CRN 50-00-0

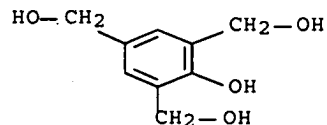
CMF C H2 O



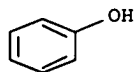
10/562,361



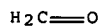
IT 2937-61-3 9003-35-4  
(IR-laser photosensitive resin compns. for planog. printing  
plate preparation containing phenolic polymers and)  
RN 2937-61-3 HCAPLUS  
CN 1,3,5-Benzenetrimethanol, 2-hydroxy- (CA INDEX NAME)



RN 9003-35-4 HCAPLUS  
CN Phenol, polymer with formaldehyde (CA INDEX NAME)  
  
CM 1  
  
CRN 108-95-2  
CMF C6 H6 O

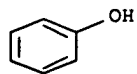


CM 2  
  
CRN 50-00-0  
CMF C H2 O



IT 9003-35-4DP, reaction products with phenylisocyanate or  
butylisocyanate or benzylisocyanate  
(preparation and use in IR-laser photosensitive resin compns. for  
planog. printing plate preparation)  
RN 9003-35-4 HCAPLUS  
CN Phenol, polymer with formaldehyde (CA INDEX NAME)  
  
CM 1  
  
CRN 108-95-2

CMF C6 H6 O



CM 2

CRN 50-00-0

CMF C H2 O

 $\text{H}_2\text{C}=\text{O}$ 

- IC ICM B41C001-10  
ICS B41M005-36; G03F007-004
- CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
- ST photosensitive resin compn phenolic polymer planog printing plate
- IT Phenolic resins, uses  
(IR-laser photosensitive resin compns. for planog. printing plate preparation containing phenolic polymers and)
- IT Printing (impact)  
(IR-laser-sensitive resin compns. containing phenolic polymers for color proofing in)
- IT Phenolic resins, uses  
(IR-laser-sensitive resin compns. for planog. printing plate preparation containing)
- IT Phenolic resins, preparation  
(reaction products with phenylisocyanate or butylisocyanate or benzylisocyanate; preparation and use in IR-laser photosensitive resin compns. for planog. printing plate preparation)
- IT 259527-67-8  
(9003354IR-laser photosensitive resin compns. for planog. printing plate preparation containing)
- IT 259527-65-6 259527-68-9 259527-69-0 259527-71-4 259527-72-5  
259527-74-7 259527-76-9 259527-78-1 259527-79-2 259527-80-5  
259527-81-6 259527-82-7 259527-83-8 259527-85-0  
259527-86-1  
(IR-laser photosensitive resin compns. for planog. printing plate preparation containing)
- IT 2937-61-3 9003-35-4 24979-70-2 27029-76-1  
69415-30-1 215253-67-1  
(IR-laser photosensitive resin compns. for planog. printing plate preparation containing phenolic polymers and)
- IT 51906-85-5P 259527-66-7P 259527-84-9P 259527-87-2P  
(preparation and reaction in preparing phenolic polymers for photosensitive resin compns. for planog. printing plate preparation)
- IT 103-71-9DP, reaction products with phenolic resins or phenol compds.  
111-36-4DP, reaction products with phenolic resins 3173-56-6DP,  
reaction products with phenolic resins 4083-64-1DP, reaction

10/562,361

products with phenolic resins 9003-35-4DP, reaction products with phenylisocyanate or butylisocyanate or benzylisocyanate 24979-70-2DP, reaction products with tosylisocyanate 25086-36-6DP, reaction products with tosylisocyanate 57167-08-5DP, reaction products with tosylisocyanate 200628-49-5DP, reaction products with tosylisocyanate

(preparation and use in IR-laser photosensitive resin compns. for planog. printing plate preparation)

IT 51-67-2 79-30-1 123-30-8 638-29-9, Pentanoyl chloride  
(reaction in preparing phenolic polymers for photosensitive resin compns. for planog. printing plate preparation)

L51 ANSWER 16 OF 28 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1999:260022 HCAPLUS Full-text

DOCUMENT NUMBER: 130:318614

TITLE: IR laser-sensitive positive photoimaging material for offset printing plate preparation

INVENTOR(S): Miyake, Hideo; Kawauchi, Ikuo

PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd, Japan

SOURCE: Eur. Pat. Appl., 56 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 4

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 909657	A2	19990421	EP 1998-119634	19981016
EP 909657	A3	19990519		
EP 909657	B1	20030618		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
JP 11119418	A	19990430	JP 1997-285754	19971017
JP 3771694	B2	20060426		
EP 1258369	A2	20021120	EP 2002-15513	19981016
EP 1258369	A3	20021204		
EP 1258369	B1	20050330		
R: DE, GB				
US 6573022	B1	20030603	US 1998-173719	19981016
EP 1437232	A2	20040714	EP 2004-8648	19981016
EP 1437232	A3	20040728		
EP 1437232	B1	20070103		
R: DE, GB				
EP 1449654	A1	20040825	EP 2004-10451	19981016
R: DE, GB				
EP 1449655	A1	20040825	EP 2004-10452	19981016
R: DE, GB				
EP 1452335	A1	20040901	EP 2004-8649	19981016
R: DE, GB				
EP 1452312	A1	20040901	EP 2004-10450	19981016
R: DE, GB				
JP 11218914	A	19990810	JP 1998-322334	19981112
JP 3949832	B2	20070725		
JP 2002196491	A	20020712	JP 2001-376180	19981112
JP 3949949	B2	20070725		
JP 2002251003	A	20020906	JP 2001-398410	19981112
JP 3949957	B2	20070725		
US 6340551	B1	20020122	US 1999-421535	19991020
US 20020081522	A1	20020627	US 2001-993634	20011127

10/562,361

JP 2004145370	A	20040520	JP 2004-45309	20040220
JP 2004145371	A	20040520	JP 2004-45310	20040220
JP 2004171029	A	20040617	JP 2004-45308	20040220
JP 2004157573	A	20040603	JP 2004-57884	20040302
JP 2004192011	A	20040708	JP 2004-57885	20040302
JP 2004192012	A	20040708	JP 2004-57886	20040302
PRIORITY APPLN. INFO.:			JP 1997-285754	A 19971017

JP 1997-313778 A 19971114

EP 1998-119634 A3 19981016

EP 2002-15513 A3 19981016

US 1998-173719 A3 19981016

JP 1998-322334 A3 19981112

OTHER SOURCE(S): MARPAT 130:318614

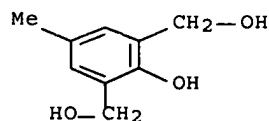
ED Entered STN: 28 Apr 1999

AB The title photoimaging material comprises a substrate, a layer (A) containing no less than 50 weight% of a copolymer which contains, as a copolymer component, no less than 10 mol% of at least one of the monomers A-1, A-2, and A-3, wherein A-1 is a monomer having in the mol. a sulfonamido group wherein at least one hydrogen atom is linked to a nitrogen atom, A-2 is a monomer having in the mol. an active imino group represented by the formula -CONHSO<sub>2</sub>-, and A-3 is a monomer selected from acrylamide, methacrylamide, acrylates, methacrylates, and hydroxystyrene, which resp. have a phenolic hydroxyl group, and a layer (B) containing no less than 50 weight% of an aqueous alkali solution-soluble resin having a phenolic hydroxyl group. The layers A and B are laminated on the substrate in that order. At least the layer B contains a compound which generates heat upon absorbing IR laser light. The photoimaging material exhibits excellent stability of sensitivity with regard to concentration of a developing solution

IT 91-04-3, 2,6-Bis(hydroxymethyl)-p-cresol 28934-28-3,  
p-Cresol-formaldehyde-phenol copolymer  
(IR laser-sensitive pos. photoimaging materials for offset  
printing plate preparation containing)

RN 91-04-3 HCAPLUS

CN 1,3-Benzenedimethanol, 2-hydroxy-5-methyl- (CA INDEX NAME)



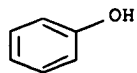
RN 28934-28-3 HCAPLUS

CN Formaldehyde, polymer with 4-methylphenol and phenol (CA INDEX NAME)

CM 1

CRN 108-95-2

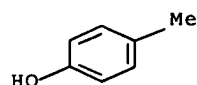
CMF C6 H6 O



CM 2

CRN 106-44-5

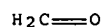
CMF C7 H8 O



CM 3

CRN 50-00-0

CMF C H2 O



- IC ICM B41M005-36  
ICS B41C001-10; G03F007-004
- CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
- IT 80-09-1 85-43-8 91-04-3, 2,6-Bis(hydroxymethyl)-p-cresol  
104-15-4, uses 127-63-9 1328-54-7, Oil Blue #603 3584-23-4  
5303-25-3, Dodecyl stearate 13249-99-5 27029-76-1,  
m-Cresol-p-cresol-formaldehyde copolymer 28391-39-1  
28934-28-3, p-Cresol-formaldehyde-phenol copolymer  
51241-17-9 62814-37-3, N-(p-Aminosulfonylphenyl)methacrylamide-  
methyl methacrylate copolymer 65697-21-4, Benzyl  
methacrylate-methacrylic acid copolymer 68584-99-6,  
Acetone-pyrogallol copolymer 1,2-naphthoquinonediazido-5-sulfonate  
69415-30-1 85568-56-5, Megafac F-177 117283-53-1 124737-97-9  
134127-48-3 137909-39-8 223561-66-8 223561-68-0  
(IR laser-sensitive pos. photoimaging materials for offset  
printing plate preparation containing)
- IT 56992-87-1P, N-(p-Aminosulfonylphenyl)methacrylamide  
(preparation and reaction in preparing resins for IR laser-sensitive pos.  
photoimaging materials for offset printing plate preparation)
- IT 203179-80-0P, N-(p-Hydroxyphenyl)methacrylamide-ethyl methacrylate  
copolymer 223561-59-9P, N-(p-Aminosulfonylphenyl)methacrylamide-  
ethyl methacrylate copolymer 223561-61-3P, Acrylonitrile-N-(p-  
aminosulfonylphenyl)acrylamide-methyl methacrylate copolymer  
223561-63-5P, Acrylonitrile-methyl methacrylate-N-(p-  
toluenesulfonyl)acrylamide copolymer

10/562,361

(preparation and use in IR laser-sensitive pos. photoimaging materials for offset printing plate preparation)

IT 63-74-1, p-Aminobenzenesulfonamide 79-10-7, 2-Propenoic acid, reactions 79-41-4, reactions 541-41-3, Ethyl chloroformate (reaction in preparing resins for IR laser-sensitive pos. photoimaging materials for offset printing plate preparation)

L51 ANSWER 17 OF 28 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1999:156435 HCAPLUS Full-text

DOCUMENT NUMBER: 130:175335

TITLE: Image recording material

INVENTOR(S): Kobayashi, Fumikazu; Kitatani, Katsuji; Oshima, Yasuhito

PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan

SOURCE: Eur. Pat. Appl., 50 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

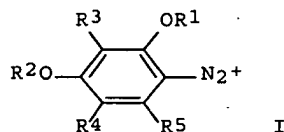
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 899614	A1	19990303	EP 1998-116192	19980827
EP 899614	B1	20020109		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
JP 11133594	A	19990521	JP 1998-8249	19980120
JP 3805519	B2	20060802		
US 6162574	A	20001219	US 1998-140347	19980826
PRIORITY APPLN. INFO.:			JP 1997-234406	A 19970829
			JP 1998-8249	A 19980120

OTHER SOURCE(S): MARPAT 130:175335

ED Entered STN: 10 Mar 1999

GI



AB An image recording material comprises at least a diazonium salt represented by the general formula I (R<sub>1</sub>, R<sub>2</sub> = a hydrocarbon group having less than 20 carbon atoms; R<sub>3</sub>, R<sub>4</sub> = H or a hydrocarbon group having less than 20 carbon atoms; R<sub>5</sub> = H or alkyloxy, aryloxy, or aralkyloxy group having less than 20 carbon atoms; and X = F<sup>-</sup>, Cl<sup>-</sup>, Br<sup>-</sup>, I<sup>-</sup>, ClO<sub>4</sub><sup>-</sup>, BF<sub>6</sub><sup>-</sup>, PF<sub>6</sub><sup>-</sup>, SbF<sub>6</sub><sup>-</sup>, AsF<sub>6</sub><sup>-</sup>, or an alkyl- or arylsulfonate anion), an IR-absorbing agent, a crosslinking agent, and a binder. The image recording material enables direct planog. printing plate production from digital computer signals by conducting recording by using an IR laser. Further, the image recording material has excellent storability.

IT 9003-35-4, Formaldehyde-phenol copolymer 161679-94-3  
162846-57-3

10/562,361

(IR-sensitive recording materials for planog.

printing plate preparation containing diazonium compds. and)

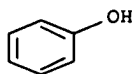
RN 9003-35-4 HCAPLUS

CN Phenol, polymer with formaldehyde (CA INDEX NAME)

CM 1

CRN 108-95-2

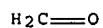
CMF C6 H6 O



CM 2

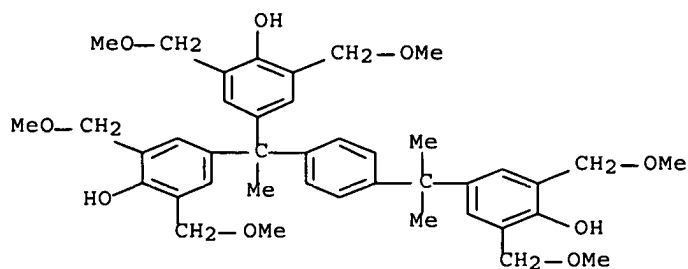
CRN 50-00-0

CMF C H2 O



RN 161679-94-3 HCAPLUS

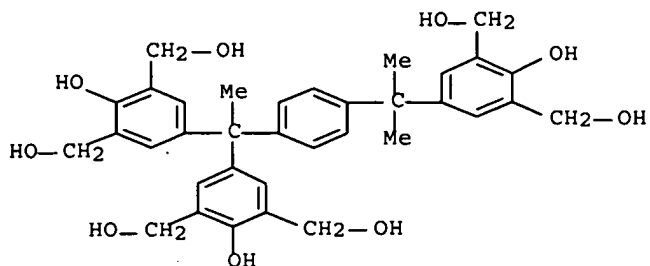
CN Phenol, 4,4'-[1-[4-[1-[4-hydroxy-3,5-bis(methoxymethyl)phenyl]-1-methylethyl]phenyl]ethylidene]bis[2,6-bis(methoxymethyl)- (CA INDEX NAME)



RN 162846-57-3 HCAPLUS

CN 1,3-Benzenedimethanol, 5,5'-[1-[4-[1-[4-hydroxy-3,5-bis(hydroxymethyl)phenyl]-1-methylethyl]phenyl]ethylidene]bis[2-hydroxy- (CA INDEX NAME)

10/562,361

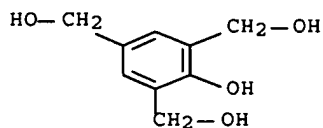


IT 2937-61-3P

(preparation and reaction in preparing crosslinking agent for IR recording materials for planog. printing plate preparation)

RN 2937-61-3 HCAPLUS

CN 1,3,5-Benzenetrimethanol, 2-hydroxy- (CA INDEX NAME)

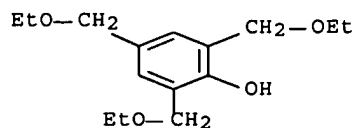


IT 215253-58-0P

(preparation and use as crosslinking agent for IR recording materials for planog. printing plate preparation)

RN 215253-58-0 HCAPLUS

CN Phenol, 2,4,6-tris(ethoxymethyl)- (CA INDEX NAME)

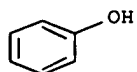


IT 108-95-2, Phenol, reactions

(reaction in preparing crosslinking agent for IR recording materials for planog. printing plate preparation)

RN 108-95-2 HCAPLUS

CN Phenol (CA INDEX NAME)





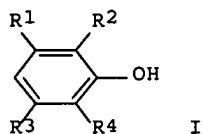
IC ICM G03F007-016  
 CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic  
 and Other Reprographic Processes)  
 ST IR recording material diazonium planog plate  
 IT Diazonium compounds  
 (IR-sensitive recording materials for planog.  
 printing plate preparation containing)  
 IT Phenolic resins, uses  
 (IR-sensitive recording materials for planog.  
 printing plate preparation containing diazonium compds. and)  
 IT Optical recording materials  
 Photoimaging materials  
 (IR; containing diazonium compds. for planog. printing plate  
 preparation)  
 IT Printing plates  
 (planog.; IR-sensitive recording materials containing  
 diazonium compds. for preparation of)  
 IT 9003-35-4, Formaldehyde-phenol copolymer 23178-67-8  
 24979-70-2, Poly(p-hydroxystyrene) 69415-30-1 161679-94-3  
 162846-57-3 201024-57-9 211991-63-8  
 (IR-sensitive recording materials for planog.  
 printing plate preparation containing diazonium compds. and)  
 IT 90-72-2P 2219-90-1P 2937-61-3P  
 (preparation and reaction in preparing crosslinking agent for IR  
 recording materials for planog. printing plate  
 preparation)  
 IT 220476-27-7P, 2-Nitro-1,3,5-triethoxybenzene 220476-28-8P,  
 2,4,6-Triethoxyaniline hydrochloride 220476-29-9P,  
 4,6-Bis(octyloxy)-2-hydroxyacetophenone 220476-30-2P,  
 4,6-Bis(octyloxy)-2-methoxyacetophenone 220476-31-3P,  
 4,6-Bis(octyloxy)-2-methoxyacetophenone oxime 220476-32-4P,  
 4,6-Bis(octyloxy)-2-methoxyacetanilide  
 (preparation and reaction in preparing diazonium salt for IR  
 recording materials for planog. printing plate  
 preparation)  
 IT 215253-58-0P  
 (preparation and use as crosslinking agent for IR recording  
 materials for planog. printing plate preparation)  
 IT 220476-34-6P 220476-36-8P 220476-38-0P 220476-39-1P  
 220476-41-5P 220476-42-6P 220476-43-7P 220476-46-0P  
 220476-48-2P 220476-49-3P 220476-50-6P 220476-51-7P,  
 2,4,6-Triethoxybenzenediazonium mesitylenesulfonate  
 (preparation and use in IR recording materials for planog.  
 printing plate preparation)  
 IT 108-95-2, Phenol, reactions 124-40-3, Dimethylamine,  
 reactions 30525-89-4, Paraformaldehyde  
 (reaction in preparing crosslinking agent for IR recording  
 materials for planog. printing plate preparation)  
 IT 108-73-6, 1,3,5-Benzenetriol 111-83-1, Octyl bromide 480-66-0  
 4065-45-6, 2-Hydroxy-4-methoxybenzophenone-5-sulfonic acid  
 16600-92-3, 2-Nitro-1,3,5-benzenetriol  
 (reaction in preparing diazonium salt for IR recording  
 materials for planog. printing plate preparation)  
 REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR  
 THIS RECORD. ALL CITATIONS AVAILABLE IN THE  
 RE FORMAT

10/562,361

ACCESSION NUMBER: 1998:685232 HCAPLUS Full-text  
DOCUMENT NUMBER: 130:8921  
TITLE: Negative-working image-recording  
material useful as lithographic plate  
INVENTOR(S): Kobayashi, Fumikazu  
PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 12 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

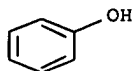
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 10282663	A	19981023	JP 1997-85295	19970403
JP 3822311	B2	20060920		
PRIORITY APPLN. INFO.:			JP 1997-85295	19970403

OTHER SOURCE(S): MARPAT 130:8921  
ED Entered STN: 29 Oct 1998  
GI



AB The title material contains (a) an acid-generating agent that generates acid upon light irradiation or heating, (b) an acid-crosslinking agent, (c) an alkali-soluble resin, (d) an IR-absorbing agent, and (e) a phenolic compound I (R1-4 = H, OH, halo, alkyl, alkoxy, hydroxymethyl, hydroxyethyl, formyl, acetyl,  $\geq 2$  of R1-4 are not hydroxymethyl or hydroxyethyl at the same time) 2-20 weight% of the total solids. The material is capable of direct platemaking from digital data by using IR ray lasers and shows high sensitivity in recording.

IT 108-95-2, Phenol, uses  
(IR-sensitive lithog. plate containing acid generator, crosslinking compound, IR absorbent, and phenolic compound)  
RN 108-95-2 HCAPLUS  
CN Phenol (CA INDEX NAME)



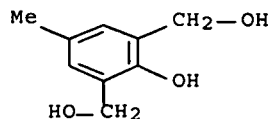
IT 91-04-3, 2,6-Bis(hydroxymethyl)-p-cresol 161679-94-3

10/562,361

(crosslinking agent; IR-sensitive lithog. plate containing acid generator, crosslinking compound, IR absorbent, and phenolic compound)

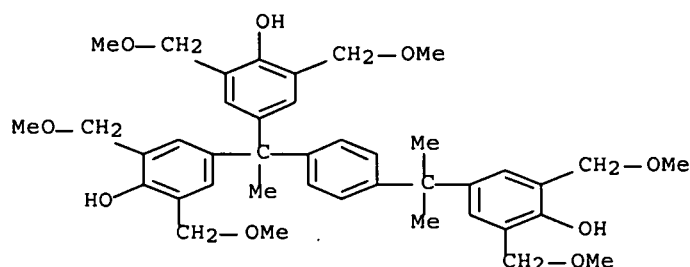
RN 91-04-3 HCAPLUS

CN 1,3-Benzenedimethanol, 2-hydroxy-5-methyl- (CA INDEX NAME)



RN 161679-94-3 HCAPLUS

CN Phenol, 4,4'-[1-[4-[1-[4-hydroxy-3,5-bis(methoxymethyl)phenyl]-1-methylethyl]phenyl]ethylidene]bis[2,6-bis(methoxymethyl)- (CA INDEX NAME)



IC ICM G03F007-038

ICS B41C001-055; B41N001-14; G03F007-00; G03F007-004

CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

IT 95-57-8, o-Chlorophenol 108-39-4, m-Cresol, uses 108-95-2, Phenol, uses 150-19-6, m-Methoxyphenol

(IR-sensitive lithog. plate containing acid generator, crosslinking compound, IR absorbent, and phenolic compound)

IT 91-04-3, 2,6-Bis(hydroxymethyl)-p-cresol 161679-94-3

(crosslinking agent; IR-sensitive lithog. plate containing acid generator, crosslinking compound, IR absorbent, and phenolic compound)

L51 ANSWER 19 OF 28 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1998:685224 HCAPLUS Full-text

DOCUMENT NUMBER: 130:8919

TITLE: Negative-working image-forming material useful for lithographic plate

INVENTOR(S): Kobayashi, Fumikazu

PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 15 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

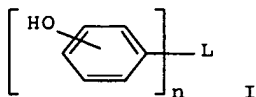
FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

10/562,361

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 10282654	A	19981023	JP 1997-88396	19970407
JP 3836563	B2	20061025		
PRIORITY APPLN. INFO.:			JP 1997-88396	19970407

OTHER SOURCE(S): MARPAT 130:8919  
 ED Entered STN: 29 Oct 1998  
 GI



AB The title material contains (a) an acid-generating agent that generates acid upon light irradiation or heating, (b) a crosslinking agent that crosslinks by acid, (c) an alkali-soluble resin, (d) an IR-absorbing agent, and (e) a phenolic compound with mol. weight  $\leq 1200$  I (L = linking group with n valences comprising alkyl, aryl or a combination of these groups, single bond; n = 2-7). The material capable of direct platemaking from digital data by using IR ray lasers shows high sensitivity in recording and the resulting printing plate provides high quality printing without greasing.

IT 9003-35-4, Formaldehyde-phenol copolymer 103250-84-6  
 , m-Cresol-p-cresol-phenol copolymer  
 (IR-sensitive lithog. plate containing phenolic compound)

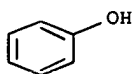
RN 9003-35-4 HCAPLUS

CN Phenol, polymer with formaldehyde (CA INDEX NAME)

CM 1

CRN 108-95-2

CMF C6 H6 O



CM 2

CRN 50-00-0

CMF C H2 O

H<sub>2</sub>C=O

10/562,361

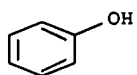
RN 103250-84-6 HCAPLUS

CN Phenol, 3-methyl-, polymer with 4-methylphenol and phenol (9CI) (CA INDEX NAME)

CM 1

CRN 108-95-2

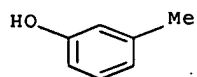
CMF C6 H6 O



CM 2

CRN 108-39-4

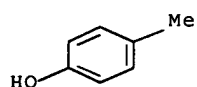
CMF C7 H8 O



CM 3

CRN 106-44-5

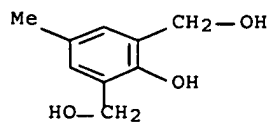
CMF C7 H8 O



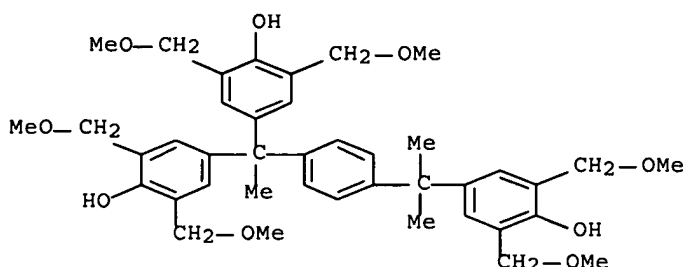
IT 91-04-3, 2,6-Bis(hydroxymethyl)-p-cresol 161679-94-3  
(crosslinking agent; IR-sensitive lithog. plate containing phenolic compound)

RN 91-04-3 HCAPLUS

CN 1,3-Benzenedimethanol, 2-hydroxy-5-methyl- (CA INDEX NAME)



RN 161679-94-3 HCAPLUS  
 CN Phenol, 4,4'-[1-[4-[1-[4-hydroxy-3,5-bis(methoxymethyl)phenyl]-1-methylethyl]phenyl]ethylidene]bis[2,6-bis(methoxymethyl)- (CA INDEX NAME)



IC ICM G03F007-004  
 ICS G03F007-004; B41C001-055; B41N001-14; G03F007-00; G03F007-038  
 CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
 IT 9003-35-4, Formaldehyde-phenol copolymer 103250-84-6, m-Cresol-p-cresol-phenol copolymer (IR-sensitive lithog. plate containing phenolic compound)  
 IT 91-04-3, 2,6-Bis(hydroxymethyl)-p-cresol 161679-94-3 (crosslinking agent; IR-sensitive lithog. plate containing phenolic compound)

L51 ANSWER 20 OF 28 HCAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 1998:685223 HCAPLUS Full-text  
 DOCUMENT NUMBER: 130:8918  
 TITLE: Negative-working image-forming material useful for lithographic plate  
 INVENTOR(S): Aoshima, Katsataro; Nakamura, Ippei  
 PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 17 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 10282653	A	19981023	JP 1997-85296	19970403
PRIORITY APPLN. INFO.:			JP 1997-85296	19970403

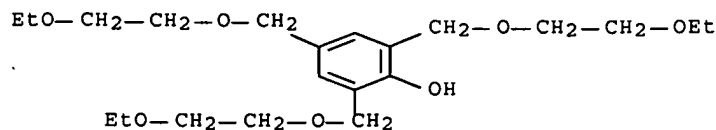
ED Entered STN: 29 Oct 1998  
 AB The title material, containing an acid-crosslinking compound, a binder polymer, a compound generating acid upon heating, and an IR-absorbing agent, employs  $\geq 1$  compound  $\text{Ar1}(\text{OH})_k[\text{CR1R2O}(\text{CR3R4CR5R6O})_n\text{R7}]_m$  [ $\text{Ar1}$  = (substituted) aromatic hydrocarbon ring;  $\text{R1-6}$  = H or  $\text{C}\leq 12$  aliphatic hydrocarbon;  $\text{R7}$  = H or  $\text{C}\leq 12$  hydrocarbon;  $n, k = 1-3$ ;  $m = 2-4$ ] for the acid-crosslinking compound. The material is capable of direct platemaking from digital data by using IR lasers and shows high sensitivity in recording.  
 IT 215777-47-2P 215777-48-3P

10/562,361

(neg.-working lithog. plate containing phenol derivative acid-crosslinking compound, acid generator, and IR absorbent)

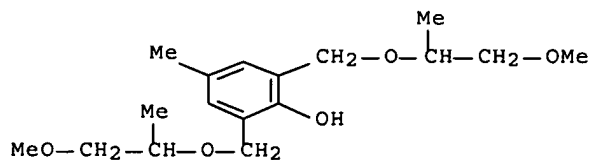
RN 215777-47-2 HCAPLUS

CN Phenol, 2,4,6-tris[(2-ethoxyethoxy)methyl]- (CA INDEX NAME)



RN 215777-48-3 HCAPLUS

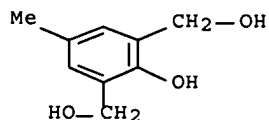
CN Phenol, 2,6-bis[(2-methoxy-1-methylethoxy)methyl]-4-methyl- (CA INDEX NAME)



IT 91-04-3P, 2,6-Bishydroxymethyl-p-cresol  
(preparation of phenol derivative acid-crosslinking compound)

RN 91-04-3 HCAPLUS

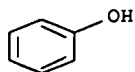
CN 1,3-Benzenedimethanol, 2-hydroxy-5-methyl- (CA INDEX NAME)



IT 108-95-2, Phenol, reactions  
(preparation of phenol derivative acid-crosslinking compound)

RN 108-95-2 HCAPLUS

CN Phenol (CA INDEX NAME)



IC ICM G03F007-004

ICS G03F007-004; B41C001-055; G03F003-10; G03F007-00; G03F007-038;

H01L021-027  
 CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic  
 and Other Reprographic Processes)  
 IT 215777-47-2P 215777-48-3P 215777-49-4P  
 215777-50-7P  
 (neg.-working lithog. plate containing phenol derivative acid-crosslinking  
 compound, acid generator, and IR absorbent)  
 IT 90-72-2P 91-04-3P, 2,6-Bishydroxymethyl-p-cresol  
 2219-90-1P  
 (preparation of phenol derivative acid-crosslinking compound)  
 IT 50-00-0, Formaldehyde, reactions 106-44-5, reactions 107-98-2,  
 1-Methoxy-2-propanol 108-24-7 108-95-2, Phenol, reactions  
 110-80-5, 2-Ethoxyethanol 124-40-3, Dimethylamine, reactions  
 (preparation of phenol derivative acid-crosslinking compound)

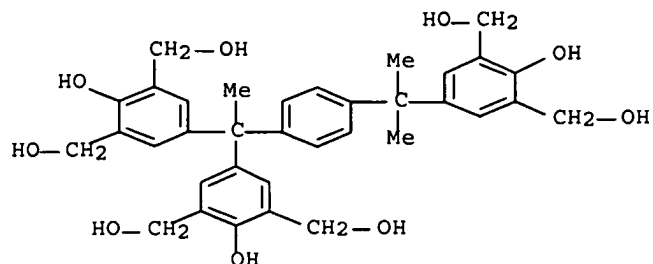
L51 ANSWER 21 OF 28 HCAPLUS. COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 1998:106203 HCAPLUS Full-text  
 DOCUMENT NUMBER: 128:198666  
 ORIGINAL REFERENCE NO.: 128:39149a,39152a  
 TITLE: Negative-working presensitized lithographic plate  
 useful for direct platemaking  
 INVENTOR(S): Kobayashi, Fumikazu  
 PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 33 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 10039509	A	19980213	JP 1996-192517	19960722
JP 3645362	B2	20050511		
US 5965319	A	19991012	US 1997-891834	19970714
PRIORITY APPLN. INFO.:			JP 1996-192517	A 19960722

ED Entered STN: 21 Feb 1998  
 AB The title material contains an onium salt having sulfonic acid as a counter  
 ion, a crosslinking agent that crosslinks by the action of acids, a polymer  
 having alkali-soluble groups, and an IR absorbent. The material is capable of  
 platemaking directly from digital data using IR lasers and shows good storage  
 stability, broader latitude in the condition of heat treatment after exposure,  
 and high printing durability.  
 IT 162846-57-3P  
 (preparation of crosslinking agent)  
 RN 162846-57-3 HCAPLUS  
 CN 1,3-Benzenedimethanol, 5,5'-[1-[4-[1-[4-hydroxy-3,5-  
 bis(hydroxymethyl)phenyl]-1-methylethyl]phenyl]ethylidene]bis[2-  
 hydroxy- (CA INDEX NAME)



10/562,361

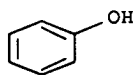


IT 9003-35-4, Formaldehyde-phenol copolymer  
 (presensitized lithog. plate containing onium sulfonate, crosslinking  
 agent, alkali-soluble resin, and IR absorbent)  
 RN 9003-35-4 HCAPLUS  
 CN Phenol, polymer with formaldehyde (CA INDEX NAME)

CM 1

CRN 108-95-2

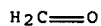
CMF C6 H6 O



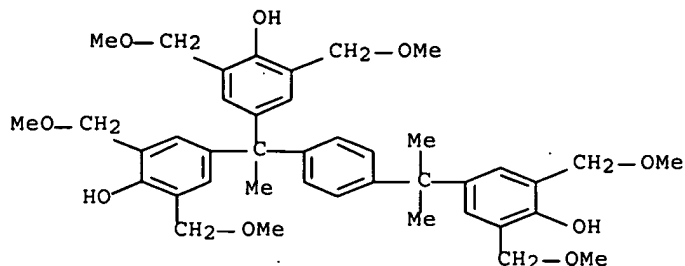
CM 2

CRN 50-00-0

CMF C H2 O



IT 161679-94-3P  
 (presensitized lithog. plate containing onium sulfonate, crosslinking  
 agent, alkali-soluble resin, and IR absorbent)  
 RN 161679-94-3 HCAPLUS  
 CN Phenol, 4,4'-[1-[4-[1-[4-hydroxy-3,5-bis(methoxymethyl)phenyl]-1-  
 methylethyl]phenyl]ethylidene]bis[2,6-bis(methoxymethyl)- (CA INDEX  
 NAME)



IC ICM G03F007-029  
ICS B41C001-055  
CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic  
and Other Reprographic Processes)  
IT 162846-57-3P  
(preparation of crosslinking agent)  
IT 9003-35-4, Formaldehyde-phenol copolymer 25085-75-0,  
Bisphenol A-formaldehyde copolymer 66003-76-7, Diphenyliodonium  
trifluoromethanesulfonate 66003-78-9, Triphenylsulfonium  
trifluoromethanesulfonate  
(presensitized lithog. plate containing onium sulfonate, crosslinking  
agent, alkali-soluble resin, and IR absorbent)  
IT 87263-95-4P 137308-86-2P 137309-10-5P 137309-11-6P  
161679-94-3P 166658-57-7P  
(presensitized lithog. plate containing onium sulfonate, crosslinking  
agent, alkali-soluble resin, and IR absorbent)

L51 ANSWER 22 OF 28 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1997:69495 HCAPLUS Full-text

DOCUMENT NUMBER: 126:96954

ORIGINAL REFERENCE NO.: 126:18585a,18588a

TITLE: Negative-working image recording  
material for offset printing

INVENTOR(S): Kobayashi, Fumikazu; Mizutani, Kazuyoshi; Aoshima,  
Keitaro

PATENT ASSIGNEE(S): Fuji Photo Film Co Ltd, Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 24 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 08276558	A	19961022	JP 1995-330618	19951219
JP 3515846	B2	20040405		
US 6132935	A	20001017	US 1996-691371	19960802
EP 780239	A2	19970625	EP 1996-112679	19960806
EP 780239	A3	19980819		
EP 780239	B1	20011107		
R: DE, GB				
PRIORITY APPLN. INFO.:			JP 1995-18120	A 19950206
			JP 1995-330618	A 19951219

ED Entered STN: 31 Jan 1997

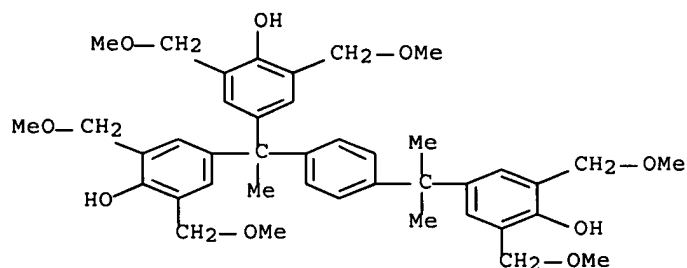
AB The title neg.-working image recording material contains a light-absorbing substance which will generate heat on exposure to light, a resin which is insol. in water but soluble in an alkaline aqueous solution, and a phenolic derivative which has 4-8 benzene nuclei,  $\geq 1$  phenolic OH's, and  $\geq 2$  -CH<sub>2</sub>OR<sub>1</sub> (R<sub>1</sub> = alkyl, acyl) groups in its mol. This image recording material is suitable for direct platemaking using near IR and IR.

IT 161679-94-3P 185502-11-8P 185502-12-9P  
185502-13-0P 185502-14-1P 185502-15-2P  
185502-16-3P 185502-17-4P 185502-19-6P  
185502-20-9P

(neg.-working image recording material from)

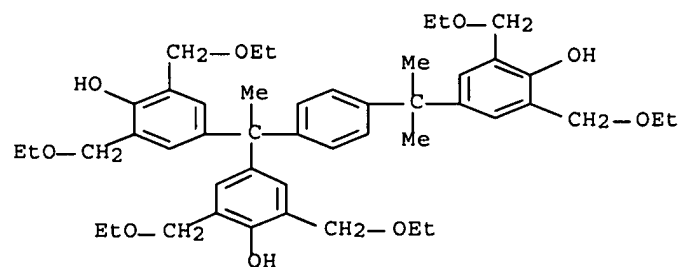
RN 161679-94-3 HCAPLUS

CN Phenol, 4,4'-[1-[4-[1-[4-hydroxy-3,5-bis(methoxymethyl)phenyl]-1-methylethyl]phenyl]ethylidene]bis[2,6-bis(methoxymethyl)- (CA INDEX NAME)



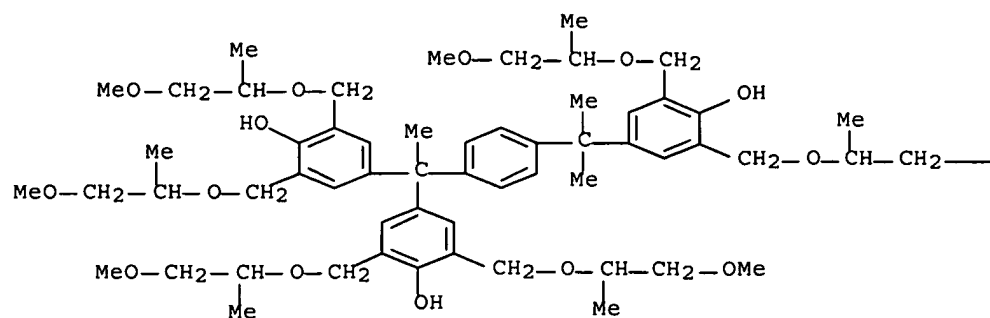
RN 185502-11-8 HCAPLUS

CN Phenol, 4,4'-[1-[4-[1-[3,5-bis(ethoxymethyl)-4-hydroxyphenyl]-1-methylethyl]phenyl]ethylidene]bis[2,6-bis(ethoxymethyl)- (9CI) (CA INDEX NAME)



RN 185502-12-9 HCAPLUS

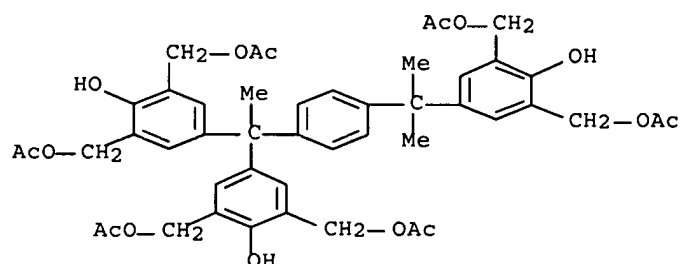
CN Phenol, 4,4'-[1-[4-[1-[4-hydroxy-3,5-bis[(2-methoxy-1-methylethoxy)methyl]phenyl]-1-methylethyl]phenyl]ethylidene]bis[2,6-bis[(2-methoxy-1-methylethoxy)methyl]- (9CI) (CA INDEX NAME)



— OMe

RN 185502-13-0 HCAPLUS

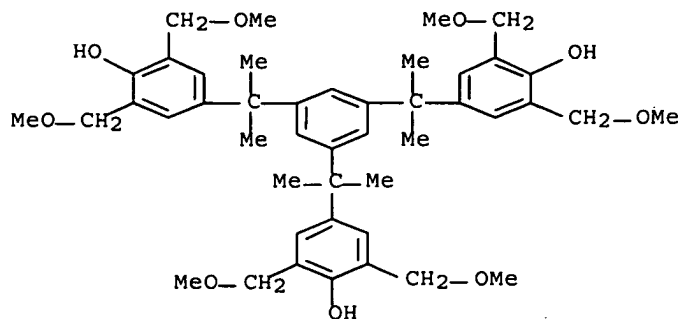
CN 1,3-Benzenedimethanol, 5,5'-[1-[4-[1-[3,5-bis[(acetyloxy)methyl]-4-hydroxyphenyl]-1-methylethyl]phenyl]ethylidene]bis[2-hydroxy-,  
 $\alpha, \alpha', \alpha'', \alpha'''$ -tetraacetate (9CI) (CA INDEX NAME)



RN 185502-14-1 HCAPLUS

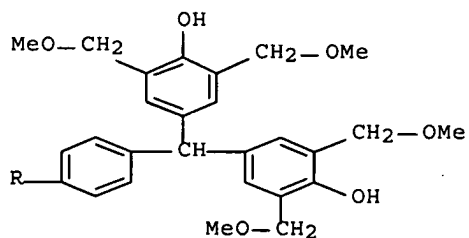
CN Phenol, 4,4',4'''-[1,3,5-benzenetriyltris(1-methylethylidene)]tris[2,6-bis(methoxymethyl)- (CA INDEX NAME)

10/562,361

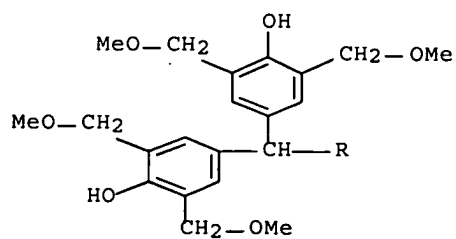


RN 185502-15-2 HCAPLUS  
 CN Phenol, 4,4',4'',4'''-(1,4-phenylenedimethylidyne)tetrakis[2,6-bis(methoxymethyl)- (9CI) (CA INDEX NAME)

PAGE 1-A

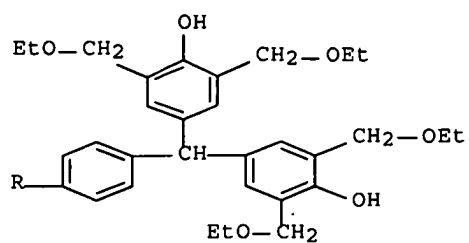


PAGE 2-A

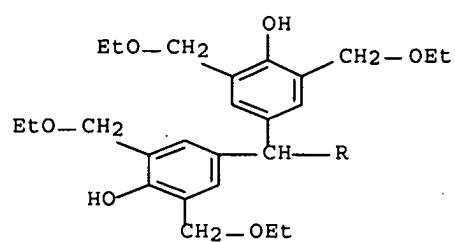


RN 185502-16-3 HCAPLUS  
 CN Phenol, 4,4',4'',4'''-(1,4-phenylenedimethylidyne)tetrakis[2,6-bis(ethoxymethyl)- (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 2-A

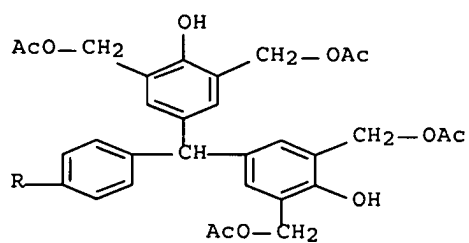


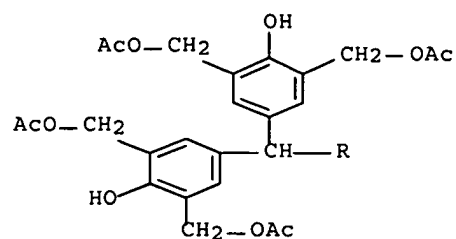
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RN      185502-17-4   HCAPLUS
CN      1,3-Benzenedimethanol, 5,5',5'',5'''-(1,4-
        phenylenedimethylidyne)tetrakis[2-hydroxy-,
        α,α',α'',α''',α'''',α''''',α
        ''''',α''''''-octaacetate (9CI) (CA INDEX NAME)

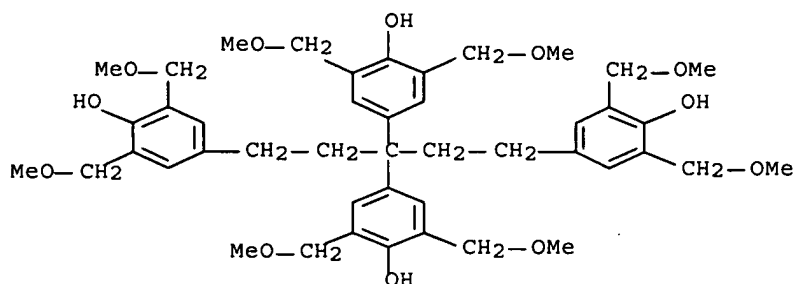
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PAGE 1-A

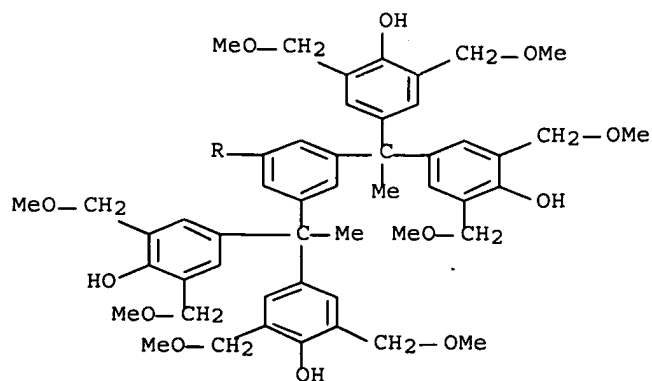


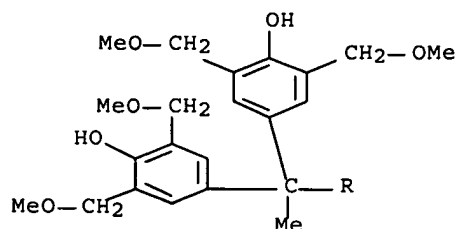


RN 185502-19-6 HCAPLUS  
 CN Phenol, 4,4',4'',4'''-(1,5-pentanediy1-3-ylidene)tetrakis[2,6-bis(methoxymethyl)-(9CI) (CA INDEX NAME)



RN 185502-20-9 HCAPLUS  
 CN Phenol, 4,4',4'',4''',4''''-(1,3,5-benzenetriyltriethylidyne)hexakis[3,5-bis(methoxymethyl)-(9CI) (CA INDEX NAME)



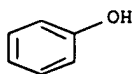


IT 9003-35-4, Formaldehyde phenol copolymer  
 (neg.-working image recording material from)  
 RN 9003-35-4 HCAPLUS  
 CN Phenol, polymer with formaldehyde (CA INDEX NAME)

CM 1

CRN 108-95-2

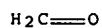
CMF C6 H6 O



CM 2

CRN 50-00-0

CMF C H2 O



IC ICM B41C001-05  
 ICS G03F007-00; G03F007-038; G03F007-20.  
 CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic  
 and Other Reprographic Processes)  
 ST neg working offset printing imaging material; lithog offset  
 platemaking imaging material  
 IT Carbon black, uses  
 Phenolic resins, uses  
 (neg.-working image recording material from)  
 IT Lithographic plates  
 (offset; neg.-working image recording material for)  
 IT 51866-54-7P 110726-32-4P 147170-12-5P 152151-64-9P  
 161679-94-3P 185502-11-8P 185502-12-9P  
 185502-13-0P 185502-14-1P 185502-15-2P  
 185502-16-3P 185502-17-4P 185502-18-5P



10/562,361

185502-19-6P 185502-20-9P

(neg.-working image recording material from)

IT 4466-18-6 18066-45-0 76937-83-2 110726-28-8 148452-55-5

(neg.-working image recording material from)

IT 9003-35-4, Formaldehyde phenol copolymer 53655-17-7

55281-19-1 90216-38-9, Allyl methacrylate-methacrylic acid copolymer

174568-71-9 174568-79-7 185502-21-0 185502-22-1 185502-23-2

(neg.-working image recording material from)

L51 ANSWER 23 OF 28 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1991:644162 HCAPLUS Full-text

DOCUMENT NUMBER: 115:244162

ORIGINAL REFERENCE NO.: 115:41393a,41396a

TITLE: Optical recording medium

INVENTOR(S): Brosius, Sibylle; Feuerherd, Karl Heinz; Harten,  
Ulrich; Schmitt, Michael; Schomann, Klaus Dieter;  
Kuppelmaier, Harald

PATENT ASSIGNEE(S): BASF A.-G., Germany

SOURCE: Ger. Offen., 5 pp.

CODEN: GWXXBX

DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	-----
DE 3935877	A1	19910502	DE 1989-3935877	19891027
JP 03264391	A	19911125	JP 1990-287401	19901026
PRIORITY APPLN. INFO.:			DE 1989-3935877	A 19891027

ED Entered STN: 29 Nov 1991

AB In an optical recording medium comprising a carrier and a light-absorbing layer consisting essentially of a soluble mixture of a thermoplastic binder and  $\geq 1$  dye, the binder is a soluble phenol-aldehyde co-condensate with a d.p.  $> 40$  and the concentration of unreacted phenol component is 0.05-5%.

IT 9003-35-4, Phenol-formaldehyde copolymer 29894-96-0

137147-48-9

(binder, in optical recording media)

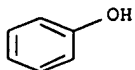
RN 9003-35-4 HCAPLUS

CN Phenol, polymer with formaldehyde (CA INDEX NAME)

CM .1

CRN 108-95-2

CMF C6 H6 O

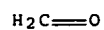


CM 2

CRN 50-00-0

10/562,361

CMF C H2 O



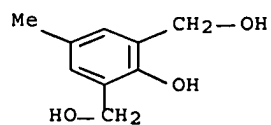
RN 29894-96-0 HCAPLUS

CN 1,3-Benzenedimethanol, 2-hydroxy-5-methyl-, polymer with  
4,4'-(1-methylethylidene)bis[phenol] (9CI) (CA INDEX NAME)

CM 1

CRN 91-04-3

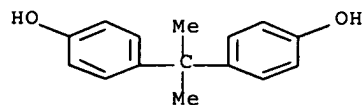
CMF C9 H12 O3



CM 2

CRN 80-05-7

CMF C15 H16 O2



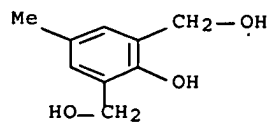
RN 137147-48-9 HCAPLUS

CN 1,3-Benzenedimethanol, 2-hydroxy-5-methyl-, polymer with  
2-methoxyphenol (9CI) (CA INDEX NAME)

CM 1

CRN 91-04-3

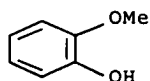
CMF C9 H12 O3



CM 2

CRN 90-05-1

CMF C7 H8 O2

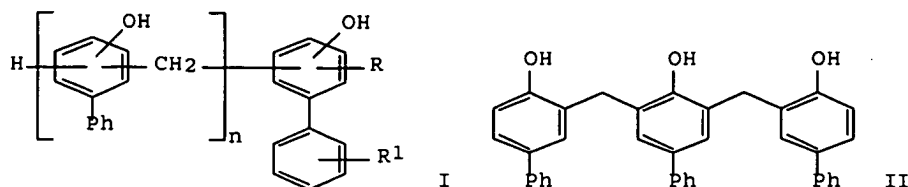


IC ICM G11B007-24  
 ICS B32B027-42; B32B027-18; C09D161-06  
 ICA C09D007-12; C09B057-00; C09B023-00; C09B047-04; C09B001-00;  
 C09B029-00; C09B045-00  
 CC 74-12 (Radiation Chemistry, Photochemistry, and Photographic  
 and Other Reprographic Processes)  
 ST optical recording medium; phenol aldehyde thermoplastic  
 binder optical recording  
 IT Recording materials  
 (optical, thermoplastic binders for, from phenol-aldehyde  
 co-condensates)  
 IT Binding materials  
 (thermoplastic, from phenol-aldehyde co-condensates, for optical  
 recording materials)  
 IT 9003-35-4, Phenol-formaldehyde copolymer 25086-36-6,  
 m-Cresol-formaldehyde copolymer 29894-96-0  
 137147-48-9  
 (binder, in optical recording media)

L51 ANSWER 24 OF 28 HCAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 1988:46926 HCAPLUS Full-text  
 DOCUMENT NUMBER: 108:46926  
 ORIGINAL REFERENCE NO.: 108:7681a,7684a  
 TITLE: Thermal recording materials  
 INVENTOR(S): Abe, Toshiyuki; Yoshikawa, Katsumasa; Gonda,  
 Michihiro; Kanasugi, Mikiko  
 PATENT ASSIGNEE(S): Hodogaya Chemical Co., Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 8 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 62167082	A	19870723	JP 1986-9028	19860121
PRIORITY APPLN. INFO.:			JP 1986-9028	19860121

ED Entered STN: 06 Feb 1988  
 GI



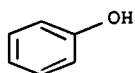
AB The title material contains a dye developer selected from  $\geq 1$  phenolic compound of the formula I (R, R1 = H, C1-5 alkyl, C1-5 alkoxy, halo; n = 1-9) in the recording layer. The thermal recording materials exhibit good sensitivity, moisture resistance, and fastness to oils and plasticizers and prevent whitening phenomena. Thus, a paper support was coated with a dispersion containing 2-o-chloroanilino-6-dibutylaminofluoran, II, Al(OH)<sub>3</sub>, and poly(vinyl alc.) to give a thermal recording paper giving high quality images with good keeping qualities.

IT 108-95-2D, derivs. 81535-95-7 81536-06-3  
112259-14-0

(thermal recording materials containing fluoran derivative color former and color developer from)

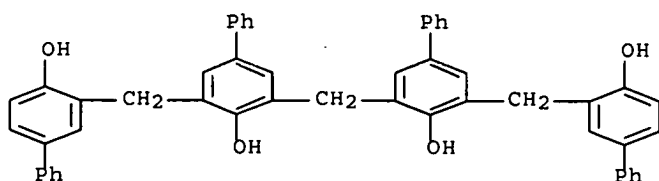
RN 108-95-2 HCAPLUS

CN Phenol (CA INDEX NAME)



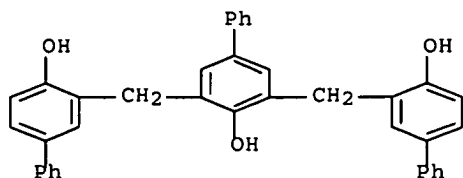
RN 81535-95-7 HCAPLUS

CN [1,1'-Biphenyl]-4-ol, 3,3''-methylenebis[5-[(4-hydroxy[1,1'-biphenyl]-3-yl)methyl]- (9CI) (CA INDEX NAME)



RN 81536-06-3 HCAPLUS

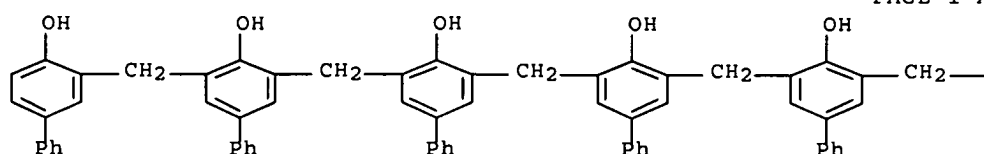
CN [1,1'-Biphenyl]-4-ol, 3,5-bis[(4-hydroxy[1,1'-biphenyl]-3-yl)methyl]- (CA INDEX NAME)



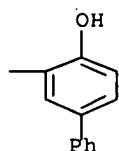
RN 112259-14-0 HCAPLUS

CN [1,1'-Biphenyl]-4-ol, 3,3''-methylenebis[5-[[4-hydroxy-5-[[4-hydroxy[1,1'-biphenyl]-3-yl)methyl][1,1'-biphenyl]-3-yl)methyl]- (9CI)  
(CA INDEX NAME)

PAGE 1-A



PAGE 1-B



IC ICM B41M005-18  
CC 74-12 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
ST thermal recording material color developer; phenolic compd  
thermal printing material  
IT Printing, nonimpact  
(thermal, phenolic compds. as color developers for materials for)  
IT 108-95-2D, derivs. 25820-85-3 81535-95-7  
81536-06-3 112259-14-0  
(thermal recording materials containing fluoran derivative color former and color developer from)  
IT 29512-49-0 55250-84-5 70516-41-5 82137-81-3  
(thermal recording materials containing phenolic compound color developer and color former from)

L51 ANSWER 25 OF 28 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1983:25533 HCAPLUS Full-text

DOCUMENT NUMBER: 98:25533

ORIGINAL REFERENCE NO.: 98:3899a,3902a

TITLE: Quinonediazide type printing plates with halogenated novolak resin.

INVENTOR(S): Stahlhofen, Paul

10/562,361

PATENT ASSIGNEE(S): Hoechst A.-G. , Fed. Rep. Ger.  
 SOURCE: Ger. Offen., 23 pp.  
 CODEN: GWXXBX  
 DOCUMENT TYPE: Patent  
 LANGUAGE: German  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 3107109	A1	19820909	DE 1981-3107109	19810226
EP 59250	A1	19820908	EP 1981-109000	19811027
EP 59250	B1	19850904		
R: AT, BE, CH, DE, FR, GB, IT, NL, SE				
AT 15412	T	19850915	AT 1981-109000	19811027
CA 1183379	A1	19850305	CA 1982-395918	19820210
ZA 8200959	A	19830126	ZA 1982-959	19820215
AU 8280579	A	19820902	AU 1982-80579	19820218
US 4404272	A	19830913	US 1982-351479	19820223
FI 8200632	A	19820827	FI 1982-632	19820224
BR 8200994	A	19830104	BR 1982-994	19820225
ES 509912	A1	19840501	ES 1982-509912	19820225
JP 57157238	A	19820928	JP 1982-29143	19820226
JP 02023859	B	19900525		
PRIORITY APPLN. INFO.:			DE 1981-3107109	A 19810226
			EP 1981-109000	A 19811027

ED Entered STN: 12 May 1984

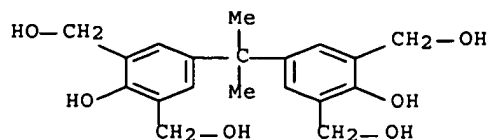
AB For superior resistivity to aromatic solvents, aqueous alkaline developer, and alc.-containing damping solns., novolak resins of mol. weight 800-5000 containing 10-30% Cl or 15-50% Br, especially in the meta- or para-position of the phenolic group, are used a binder in neg.- or, especially, pos.-working <10µ printing plate coatings on an Al support. The resins are obtained by condensing a halogenated phenol with HCHO and an acid catalyst at 80-130° in an organic solvent medium in 0.5-4 h, or by halogenating com. cresol-novolak resins in AcOH at 100°. They may be used in combination with nonhalogenated resins and 0-20% of other types. Thus, an anodized Al plate was coated at 2.0 g/m2 (dry) with a solution of (in parts) ester from 1 mol 2,3,4-trihydroxybenzophenone and 2 mol naphthoquinone-(1,2)-diazide-(2)-5-sulfonyl chloride 1.00, naphthoquinone-(1,2)-diazide-(2)-4- sulfonyl chloride 0.14, brominated cresol-HCHO novolak (Br 39%; softening 95-110°) 2.50, nonhalogenated novolak (softening 105-120°) 3.50, crystal violet 0.06, MeOC2H4OH 40, and THF 50 parts. Exposure through a pos. transparency and removal of the exposed areas with an aqueous solution of Na2SiO3, Na3PO4, and NaH2PO4 resulted in a plate yielding 200,000 copies in an offset press.

IT 3957-22-0

(photosensitive composition containing halogenated novolak binder and, for printing plate preparation)

RN 3957-22-0 HCAPLUS

CN 1,3-Benzenedimethanol, 5,5'-(1-methylethylidene)bis[2-hydroxy- (CA INDEX NAME)



IT 9003-35-4D, brominated  
(photosensitive composition containing quinonediazide and, as binder, for  
printing plate preparation)

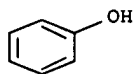
RN 9003-35-4 HCAPLUS

CN Phenol, polymer with formaldehyde (CA INDEX NAME)

CM 1

CRN 108-95-2

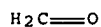
CMF C6 H6 O



CM 2

CRN 50-00-0

CMF C H2 O



IC G03C001-495; G03C001-71; G03F007-08; G03F007-26

CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic  
and Other Reprographic Processes)

ST halogenated novolak quinonediazide printing plate\*

IT Phenolic resins, uses and miscellaneous

(novolak, halogenated, photosensitive composition containing quinonediazide  
and, for printing plate preparation)

IT 3957-22-0 31001-73-7 38686-70-3 71510-01-5 81125-13-5  
84077-87-2

(photosensitive composition containing halogenated novolak binder and, for  
printing plate preparation)

IT 36451-09-9 53050-67-2

(photosensitive composition containing halogenated novolak resin binder

and,

for printing plate preparation)

IT 9003-35-4D, brominated 9016-83-5D, brominated 26045-03-4

(photosensitive composition containing quinonediazide and, as binder, for  
printing plate preparation)

L51 ANSWER 26 OF 28 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1982:591253 HCAPLUS Full-text

DOCUMENT NUMBER: 97:191253

ORIGINAL REFERENCE NO.: 97:31827a,31830a

TITLE: Light-sensitive copying material and process for  
producing a printing form from this  
material

INVENTOR(S): Stahlhofen, Paul

PATENT ASSIGNEE(S): Hoechst A.-G., Fed. Rep. Ger.

SOURCE: Eur. Pat. Appl., 33 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 50802	A2	19820505	EP 1981-108356	19811015
EP 50802	A3	19820818		
EP 50802	B1	19850410		
R: AT, BE, CH, DE, FR, GB, IT, NL, SE				
DE 3039926	A1	19820527	DE 1980-3039926	19801023
CA 1151934	A1	19830816	CA 1981-387589	19811008
ZA 8107130	A	19820929	ZA 1981-7130	19811015
AU 8176652	A	19820429	AU 1981-76652	19811020
JP 57111529	A	19820712	JP 1981-166530	19811020
JP 01049932	B	19891026		
US 4387152	A	19830607	US 1981-313354	19811020
FI 8103292	A	19820424	FI 1981-3292	19811021
BR 8106818	A	19820706	BR 1981-6818	19811022
PRIORITY APPLN. INFO.:			DE 1980-3039926	A 19801023

OTHER SOURCE(S): MARPAT 97:191253

ED Entered STN: 12 May 1984

AB A photosensitive composition for the production of a printing plate is composed of a water-insol., aqueous alkaline solution-soluble binder, a photosensitive o- or p-quinonediazide or a mixture containing a compound cleaving off an acid group on exposure, a compound containing an acid-cleavable COC group, and a phenolic compound. The addition of the phenolic compound allows the baking temperature of the plate to be decreased without affecting the improved properties., such as solvent resistance and good printing layer hardness, resulting from the baking. In addition, baking at a lower temperature decreases the formation of ppts. of thermal decomposition products on the image background of the plate. Thus, an electrochem. grained and anodized Al plate was coated with a composition containing 2,3,4-trihydroxybenzophenone bis(1,2-naphthoquinone-2-diazido-5-sulfonate) 1.00, 2,2'-dihydroxy-1,1'-dinaphthylmethane bis(1,2-naphthoquinone-2-diazido-5-sulfonate) 0.70, cresol-HCHO copolymer 4.25, 4-(p-tolylmercapto)-2,5-diethoxybenzenediazonium hexafluorophosphate 0.12, 2,2-bis[4-hydroxy-3,5-bis(hydroxymethyl)phenyl]propane (I) 1.30, crystal violet 0.07, THF 50, and ethylene glycol monomethyl ether 40 parts at 2.20 g/m<sup>2</sup> (dry), exposed, developed, and heated at 180° for 8 min. The finished plate showed complete resistance to organic solvents and was capable of producing 350,000 prints vs. no solvent resistance and 100,000 prints for a I-free control.

IT 91-04-3 3957-22-0 13653-12-8

83210-96-2 83210-97-3

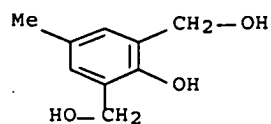
(photosensitive composition containing quinonediazide and, for  
printing plates required decreased baking temperature)

RN 91-04-3 HCAPLUS



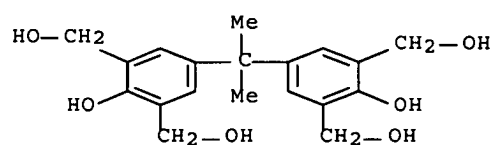
10/562,361

CN 1,3-Benzenedimethanol, 2-hydroxy-5-methyl- (CA INDEX NAME)



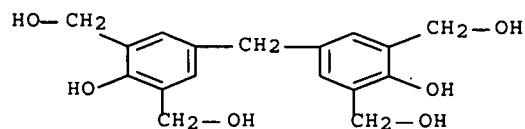
RN 3957-22-0 HCAPLUS

CN 1,3-Benzenedimethanol, 5,5'-(1-methylethylidene)bis[2-hydroxy- (CA INDEX NAME)



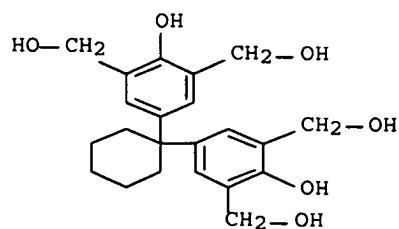
RN 13653-12-8 HCAPLUS

CN 1,3-Benzenedimethanol, 5,5'-methylenebis[2-hydroxy- (CA INDEX NAME)



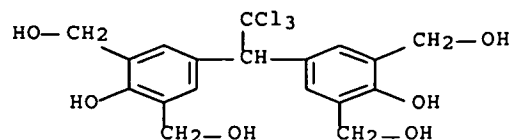
RN 83210-96-2 HCAPLUS

CN 1,3-Benzenedimethanol, 5,5'-cyclohexylidenebis[2-hydroxy- (CA INDEX NAME)

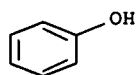


RN 83210-97-3 HCAPLUS

CN 1,3-Benzenedimethanol, 5,5'-(2,2,2-trichloroethylidene)bis[2-hydroxy- (CA INDEX NAME)



IT 108-95-2, reactions  
 (reaction of, with cyclohexanone)  
 RN 108-95-2 HCAPLUS  
 CN Phenol (CA INDEX NAME)



IC G03F007-08; G03F007-10  
 CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic  
 and Other Reprographic Processes)  
 ST printing plate photosensitive phenol baking  
 IT Phenols, uses and miscellaneous  
 (photosensitive composition containing, for printing plates  
 requiring decreased baking temperature)  
 IT Printing plates  
 (photosensitive compns. containing quinonediazide and phenolic compds.  
 for fabrication of, with decreased baking temperature)  
 IT 548-62-9 2481-94-9 5610-94-6 9016-83-5 32060-64-3 33910-44-0  
 36451-09-9 38686-70-3 69432-41-3 69666-56-4 71241-63-9  
 81125-13-5 83210-94-0 83210-95-1 83270-85-3  
 (photosensitive composition containing phenol derivative and, for  
 printing plates with decreased baking temperature)  
 IT 91-04-3 3957-22-0 13653-12-8  
 83210-96-2 83210-97-3  
 (photosensitive composition containing quinonediazide and, for  
 printing plates required decreased baking temperature)  
 IT 108-95-2, reactions  
 (reaction of, with cyclohexanone)

L51 ANSWER 27 OF 28 HCAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 1979:558518 HCAPLUS Full-text  
 DOCUMENT NUMBER: 91:158518  
 ORIGINAL REFERENCE NO.: 91:25593a,25596a  
 TITLE: Mixtures based on alkenyl-substituted phenols and  
 polymercaptans  
 INVENTOR(S): Green, George Edward; Zahir, Sheik Abdul-Cader  
 PATENT ASSIGNEE(S): Ciba-Geigy A.-G., Switz.  
 SOURCE: Ger. Offen., 47 pp.  
 CODEN: GWXXBX  
 DOCUMENT TYPE: Patent  
 LANGUAGE: German  
 FAMILY ACC. NUM. COUNT: 1

## PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 2901686	A1	19790726	DE 1979-2901686	19790117
GB 2012781	B	19820317	GB 1979-396	19790105
GB 2012781	A	19790801		
CA 1136340	A1	19821123	CA 1979-319835	19790118
FR 2415126	A1	19790817	FR 1979-1330	19790119
FR 2415126	B1	19830718		
US 4308367	A	19811229	US 1979-4960	19790119
JP 54113000	A	19790904	JP 1979-6506	19790120
PRIORITY APPLN. INFO.:			GB 1978-2597	A 19780120

ED Entered STN: 12 May 1984

AB 2,2-Bis(3-allyl-4-hydroxyphenyl)propane (I), 2,2-bis[4-hydroxy-3-(1-propenyl)phenyl]propane, 2,2-bis(3,5-diallyl-4-hydroxyphenyl)propane, or a similar compound is used with (HSCH<sub>2</sub>CO<sub>2</sub>CH<sub>2</sub>)<sub>2</sub> (II), C(CH<sub>2</sub>O<sub>2</sub>CCH<sub>2</sub>SH)<sub>4</sub>, a tris(2-hydroxy-3-mercaptopropyl) ether of a propoxylated triol, or a similar compound and, in some cases, with a hardener or epoxidized novolak to prepare compns. which are hardenable by light or radical catalysts and are useful for the preparation of coatings, printing plates, printed circuits, reinforced laminates, adhesives, etc. Thus, a mixture of I 100, II 68, benzil di-Me acetal 4, and hexamethylenetetramine 5 parts was mixed with glass fibers and exposed to UV light to prepare a tack-free prepreg. The prepreg was used to prepare a laminate which contained 57.2% glass fibers and had flexural strength 265 MN/m<sup>2</sup> after hardening at 180° for 1 h.

IT 9003-35-4D, glycidyl ethers  
(crosslinking agents, for polyene-polythiol copolymers)

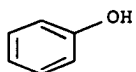
RN 9003-35-4 HCAPLUS

CN Phenol, polymer with formaldehyde (CA INDEX NAME)

CM 1

CRN 108-95-2

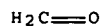
CMF C6 H6 O



CM 2

CRN 50-00-0

CMF C H2 O

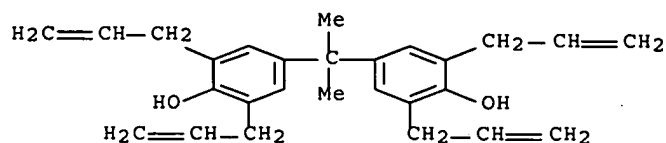


IT 71449-73-5DP, polymers with polythiols 71452-61-4P  
(manufacture of crosslinked)

RN 71449-73-5 HCAPLUS

10/562,361

CN Phenol, 4,4'-(1-methylethylidene)bis[2,6-di-2-propenyl- (9CI) (CA INDEX NAME)



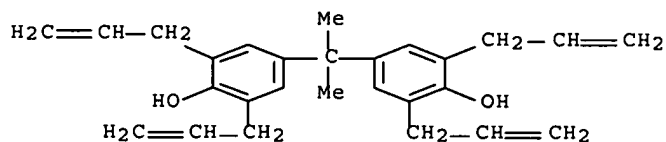
RN 71452-61-4 HCAPLUS

CN Acetic acid, mercapto-, 2-ethyl-2-[[[(mercaptoacetyl)oxy]methyl]-1,3-propanediyl ester, polymer with 4,4'-(1-methylethylidene)bis[2,6-di-2-propenylphenol] (9CI) (CA INDEX NAME)

CM 1

CRN 71449-73-5

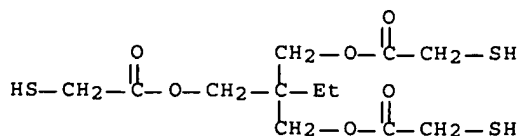
CMF C27 H32 O2



CM 2

CRN 10193-96-1

CMF C12 H20 O6 S3



IC C08L081-04; C08L081-02

CC 36-3 (Plastics Manufacture and Processing)

Section cross-reference(s): 74

IT 9003-35-4D, glycidyl ethers

(crosslinking agents, for polyene-polythiol copolymers)

IT 96-27-5DP, ethers with propoxylated triols, polymers with polyenes

1745-89-7DP, polymers with polythiols 10193-96-1DP, polymers with

polyenes 25322-69-4DP, ethers with triols and thioglycerol, polymers

with polyenes 71449-72-4DP, polymers with polythiols

71449-73-5DP, polymers with polythiols 71449-74-6DP,

10/562,361

polymers with polythiols 71449-75-7DP, polymers with polythiols  
 71452-57-8P 71452-58-9P 71452-59-0P 71452-60-3P  
 71452-61-4P 71489-64-0DP, polymers with polythiols  
 (manufacture of crosslinked)

L51 ANSWER 28 OF 28 HCAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 1976:128785 HCAPLUS Full-text  
 DOCUMENT NUMBER: 84:128785  
 ORIGINAL REFERENCE NO.: 84:20869a,20872a  
 TITLE: Light-sensitive copying material  
 INVENTOR(S): Teuscher, Leon A.  
 PATENT ASSIGNEE(S): American Hoechst Corp., USA  
 SOURCE: Ger. Offen., 267 pp. Division of Ger. Offen.  
 2,024,244.  
 CODEN: GWXXBX  
 DOCUMENT TYPE: Patent  
 LANGUAGE: German  
 FAMILY ACC. NUM. COUNT: 2  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 2065732	A1	19750821	DE 1970-2065732	19700519
DE 2065732	C2	19830519		
NL 7006715	A	19701124	NL 1970-6715	19700508
NL 168631	B	19811116		
NL 168631	C	19820416		
SE 369417	B	19740826	SE 1970-6693	19700515
SE 376492	B	19750526	SE 1973-5098	19700515
SU 568395	A3	19770805	SU 1970-1435202	19700515
ES 379776	A1	19740816	ES 1970-379776	19700518
PL 94400	B1	19770831	PL 1970-174772	19700518
IL 34547	A	19830515	IL 1970-34547	19700518
ZA 7003395	A	19710630	ZA 1970-3395	19700519
GB 1312925	A	19730411	GB 1970-24217	19700519
AT 314350	B	19740325	AT 1970-4467	19700519
AT 314501	B	19740410	AT 1971-553	19700519
CA 973544	A1	19750826	CA 1970-83035	19700519
NO 133035	B	19751117	NO 1970-1907	19700519
HU 167985	B	19760228	HU 1970-AO314	19700519
FI 53897	B	19780502	FI 1970-1398	19700519
CH 607099	A5	19781130	CH 1970-7390	19700519
DK 143818	B	19811012	DK 1970-2533	19700519
DK 143818	C	19820315		
BE 750692	A	19701120	BE 1970-750692	19700520
FR 2048538	A5	19710319	FR 1970-18228	19700520
JP 49048001	B	19741219	JP 1970-42823	19700520
SU 522824	A3	19760725	SU 1970-1482185	19701006
NO 138817	C	19781115	NO 1973-2024	19730515
NO 138817	B	19780807		
US 3867147	A	19750218	US 1973-410324	19731029
PRIORITY APPLN. INFO.:			US 1969-826297	A 19690520

ED Entered STN: 12 May 1984

AB Light-sensitive copying materials, which can be used to prepare either copies or printing plates, are composed of a support carrying a light-sensitive layer containing a condensation product of an aromatic diazonium compound, such as a diphenylaminediazonium salt, with a carbonyl compound and/or an aromatic thio ether or a phenolic ether. Thus, a 2% aqueous solution of the chloride salt of the condensation product of 3-methoxydiphenylamine-4-diazonium sulfate and

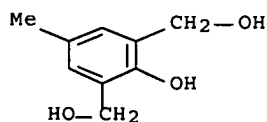
10/562,361

4,4- bis(acetoxymethyl)diphenyl ether was coated on an Al foil support, exposed through a negative, developed with 1.5% aqueous H<sub>3</sub>PO<sub>4</sub>, and colored with an oily dye to give a serviceable printing plate.

IT 91-04-3D, 1,3-Benzenedimethanol, 2-hydroxy-5-methyl-, reaction product with methoxydiphenylaminediazonium phosphate 108-95-2D, Phenol, reaction product with aryl diazonium salts and formaldehyde 32449-09-5D, Phenol, 2,6-bis(methoxymethyl)-4-methyl-, reaction product with formaldehyde and methoxydiphenylaminediazonium chloride  
(light-sensitive compns. containing, for diazo copying and printing plates)

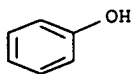
RN 91-04-3 HCAPLUS

CN 1,3-Benzenedimethanol, 2-hydroxy-5-methyl- (CA INDEX NAME)



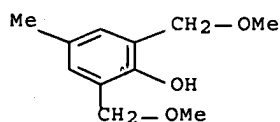
RN 108-95-2 HCAPLUS

CN Phenol (CA INDEX NAME)



RN 32449-09-5 HCAPLUS

CN Phenol, 2,6-bis(methoxymethyl)-4-methyl- (CA INDEX NAME)



IC G03C001-52A

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic Processes)

ST arom diazonium salt printing plate; diazonium condensate printing plate

IT Diazo process

Printing plates

(light-sensitive compns. containing aromatic diazonium salt condensation products for)

IT Diazonium compounds

(salts, condensation products, light-sensitive compns. containing, for diazo copying and printing plates)

IT 1,2,3-Propanetricarboxamide, N,N',N''-tris(hydroxymethyl)-, reaction

- product with diphenylaminediazonium phosphate
- 1,3,5-Triazine-2,4,6-triamine, N,N,N',N',N'',N''-hexakis(methoxymethyl)-, reaction product with formaldehyde and methoxydiphenylaminediazonium phosphate
- 1,4-Benzenedicarboxamide, N,N'-bis(hydroxymethyl)-, reaction product with methoxydiphenylaminediazonium sulfate
- Benzenediazonium, 2,5-dimethoxy-4-[(4-methylphenyl)thio]-, (T-4)-tetrachlorozincate(2-) (2:1), reaction product with bis(hydroxymethyl)benzene
- Benzenediazonium, 2,5-dimethoxy-4-[methyl[1-oxo-2-(phenylthio)ethyl]amino]-, (T-4)-tetrachlorozincate(2-) (2:1), reaction product with bis(hydroxymethyl)benzene
- Benzenediazonium, 2-carboxy-4-(phenylamino)-, hydroxide, inner salt, reaction product with bis(methoxymethyl)diphenyl ether
- Benzenediazonium, 2-methoxy-6-phenoxy-, (T-4)-tetrachlorozincate(2-) (2:1), reaction product with bis(hydroxymethyl)benzene
- Benzenediazonium, 4-(phenylamino)-3-sulfo-, hydroxide, inner salt, reaction product with dimethylaniline and paraformaldehyde
- Benzenediazonium, 4-[(2,5-diethoxybenzoyl)amino]-2,5-diethoxy-, (T-4)-tetrachlorozincate(2-) (2:1), reaction product with bis(hydroxymethyl)benzene
- Benzenediazonium, 4-[methyl(1-naphthalenylmethyl)amino]-, (T-4)-tetrachlorozincate(2-) (2:1), reaction product with bis(methoxymethyl)diphenyl ether
- Benzenediazonium, 4-[methyl[2-(phenylthio)ethyl]amino]-, (T-4)-tetrachlorozincate(2-) (2:1), reaction product with bis(hydroxymethyl)benzene
- Butanediamide, N,N'-bis(hydroxymethyl)-, reaction product with diphenylaminediazonium sulfate
- Ethanediamide, N,N'-bis(hydroxymethyl)-, reaction product with diphenylaminediazonium sulfate
- Hexanediamide, N,N'-bis(hydroxymethyl)-, reaction product with diphenylaminediazonium sulfate
- Urea, N,N'-bis(hydroxymethyl)-, reaction product with diphenylaminediazonium chloride
- Zincate(2-), tetrachloro-, (T-4)-, bis(2-methoxy-6-phenoxybenzenediazonium), reaction product with bis(hydroxymethyl)benzene
- Zincate(2-), tetrachloro-, (T-4)-, bis[2,5-dimethoxy-4-[(4-methylphenyl)thio]benzenediazonium], reaction product with bis(hydroxymethyl)benzene
- Zincate(2-), tetrachloro-, (T-4)-, bis[2,5-dimethoxy-4-[methyl[1-oxo-2-(phenylthio)ethyl]amino]benzenediazonium], reaction product with bis(hydroxymethyl)benzene
- Zincate(2-), tetrachloro-, (T-4)-, bis[4-[(2,5-diethoxybenzoyl)amino]-2,5-diethoxybenzenediazonium], reaction product with bis(hydroxymethyl)benzene
- Zincate(2-), tetrachloro-, (T-4)-, bis[4-[methyl(1-naphthalenylmethyl)amino]benzenediazonium], reaction product with bis(methoxymethyl)diphenyl ether
- Zincate(2-), tetrachloro-, (T-4)-, bis[4-[methyl[2-(phenylthio)ethyl]amino]benzenediazonium], reaction product with bis(hydroxymethyl)benzene  
(light-sensitive compns. containing, for diazo copying and printing plates)
- IT Benzenediazonium, 2,5-dimethoxy-4-phenoxy-, (T-4)-tetrachlorozincate(2-) (2:1), reaction product with diisopropyldi(methoxymethyl)benzene
- Zincate(2-), tetrachloro-, (T-4)-, bis(2,5-dimethoxy-4-phenoxybenzenediazonium), reaction product with diisopropyldi(methoxymethyl)benzene

(light-sensitive compns. containing, for diazo copying materials and printing plates)

IT 64-10-8D, Urea, phenyl-, reaction product with diphenylaminediazonium sulfate and formaldehyde 68-34-8D, Benzenesulfonamide, 4-methyl-N-phenyl-, reaction product with diphenylaminediazonium sulfate and formaldehyde 70-55-3D, Benzenesulfonamide, 4-methyl-, reaction product with formaldehyde and methoxydiphenylaminediazonium sulfate 71-43-2D, Benzene, reaction product with diphenylaminediazonium sulfate, formaldehyde, and phenanthrene 80-39-7D, Benzenesulfonamide, N-ethyl-4-methyl-, reaction product with diphenylaminediazonium sulfate and formaldehyde 85-01-8D, Phenanthrene, reaction product with benzene, diphenylaminediazonium sulfate, and formaldehyde 91-01-0D, Benzenemethanol,  $\alpha$ -phenyl-, reaction product with diphenylaminediazonium sulfate and formaldehyde 91-04-3D, 1,3-Benzenedimethanol, 2-hydroxy-5-methyl-, reaction product with methoxydiphenylaminediazonium phosphate 92-22-8D, Benzamide, N-(2,5-diethoxyphenyl)-, reaction product with diphenylaminediazonium sulfate and formaldehyde 92-52-4D, 1,1'-Biphenyl, methoxylated, reaction product with formaldehyde and methoxydiphenylaminediazonium sulfate 93-01-6D, 2-Naphthalenesulfonic acid, 6-hydroxy-, reaction product with diphenylaminediazonium sulfate and formaldehyde 98-54-4D, Phenol, 4-(1,1-dimethylethyl)-, reaction product with formaldehyde and methoxydiphenylaminediazonium chloride 99-96-7D, Benzoic acid, 4-hydroxy-, reaction product with diphenylaminediazonium sulfate and formaldehyde 100-02-7D, Phenol, 4-nitro-, reaction product with diphenylaminediazonium sulfate and formaldehyde 100-66-3D, Benzene, methoxy-, reaction product with diphenylaminediazonium sulfate and formaldehyde 101-16-6D, Benzenamine, 3-methoxy-N-phenyl-, reaction product with diphenylaminediazonium sulfate, chlorodiphenylamine, and formaldehyde 101-56-4D, Benzenediazonium, 4-(phenylamino)-, chloride, reaction product 101-84-8D, Benzene, 1,1'-oxybis-, derivs., reaction product with diphenylaminediazonium sulfate and formaldehyde 101-84-8D, Benzene, 1,1'-oxybis-, reaction product with formaldehyde and methoxydiphenylaminediazonium sulfate 103-85-5D, Thiourea, phenyl-, reaction product with diphenylaminediazonium sulfate and formaldehyde 108-67-8D, Benzene, 1,3,5-trimethyl-, reaction product with formaldehyde and methoxydiphenylaminediazonium sulfate 108-69-0D, Benzenamine, 3,5-dimethyl-, reaction product with 4-diazo-2-sulfodiphenylamine and formaldehyde 108-95-2D, Phenol, reaction product with aryl diazonium salts and formaldehyde 110-02-1D, Thiophene, reaction product with formaldehyde and methoxydiphenylaminediazonium phosphate 122-39-4D, Benzenamine, N-phenyl-, reaction product with formaldehyde, methyldiphenylamine, and methoxydiphenylaminediazonium phosphate 122-59-8D, Acetic acid, phenoxy-, reaction product with diphenylaminediazonium chloride and formaldehyde 122-99-6D, Ethanol, 2-phenoxy-, reaction product with formaldehyde and methoxydiphenylaminediazonium salts 132-65-0D, Dibenzothiophene, methoxylated, reaction product with formaldehyde and methoxydiphenylaminediazonium sulfate 150-33-4D, Benzenediazonium, 4-(phenylamino)-, sulfate (2:1), reaction product 298-12-4D, Acetic acid, oxo-, reaction product with diphenyldiazonium sulfate and phenoxyethanol 589-29-7D, 1,4-Benzenedimethanol, reaction product with aryl diazonium salts 620-84-8D, Benzenamine, 4-methyl-N-phenyl-, reaction product with formaldehyde and methoxydiphenylaminediazonium phosphate 628-94-4D, Hexanediamide, reaction product with diphenylaminediazonium sulfate and formaldehyde 836-30-6D, Benzenamine, 4-nitro-N-phenyl-, reaction product with formaldehyde and methoxydiphenylaminediazonium chloride 1205-71-6D,



Benzenamine, 4-chloro-N-phenyl-, reaction product with diphenylaminediazonium sulfate, formaldehyde, and methoxydiphenylamine 1447-10-5D, 1,4-Benzenedimethanol, 2,3,5,6-tetramethyl-, diacetate, reaction product with carboxydiphenylaminediazonium phosphate 1579-40-4D, Benzene, 1,1'-oxybis[4-methyl-, methoxylated, reaction product with formaldehyde and methoxydiphenylaminediazonium sulfate 1606-67-3D, 1-Pyrenamine, reaction product with diphenylaminediazonium sulfate and formaldehyde 1740-54-1D, Decanediamide, reaction product with formaldehyde and methoxydiphenylaminediazonium sulfate 2416-40-2D, Benzenemethanol, 4,4'-oxybis-, diacetate, reaction product with methoxydiphenylaminediazonium sulfate 2436-85-3D, 2-Naphthalenamine, N,N-dimethyl-, reaction product with diphenylaminediazonium sulfate and formaldehyde 2509-26-4D, Benzene, 1,1'-oxybis[4-(methoxymethyl)-, reaction product with formaldehyde and methoxydiphenylaminediazonium salts 3061-36-7D, Benzene, 1,4-diphenoxy-, methoxylated, reaction product with formaldehyde and methoxydiphenylaminediazonium sulfate 3701-01-7D, 1,3-Benzenedisulfonamide, reaction product with diphenylaminediazonium sulfate and formaldehyde 4858-48-4D, [1,1'-Biphenyl]-4-diazonium, 2,4',5-triethoxy-, sulfate (1:1), reaction product with bis(methoxymethyl)diphenyl ether 6327-85-1D, 1,3-Benzenedimethanol, 2-methoxy-5-methyl-, reaction product with methoxydiphenylaminediazonium sulfate 6631-37-4D, 2-Pyridinamine, N-phenyl-, reaction product with diphenylaminediazonium sulfate and formaldehyde 7337-55-5D, Benzenediazonium, 4-(phenylamino)-, phosphate (1:1), reaction product 7371-81-5D, 1,3-Benzenedimethanol, 4,6-dimethyl-, reaction product with bis(acetoxymethyl)naphthalene and diphenylaminediazonium sulfate 7400-08-0D, 2-Propenoic acid, 3-(4-hydroxyphenyl)-, reaction product with diphenylaminediazonium chloride and formaldehyde 7456-77-1D, Benzenediazonium, 2-methoxy-4-(phenylamino)-, phosphate (1:1), reaction product 7522-62-5D, 1,4-Benzenedimethanol, 2,3,5,6-tetramethyl-, reaction product with methoxydiphenylaminediazonium sulfate 13510-60-6D, Benzenediazonium, 2-methoxy-4-(phenylamino)-, chloride, reaction product 21521-76-6D, Phosphonic acid, [(3-methylphenoxy)methyl]-, reaction product with diphenylaminediazonium sulfate and formaldehyde 21521-81-3D, Phosphonic acid, [(4-chlorophenoxy)methyl]-, reaction product with formaldehyde and methoxydiphenylaminediazonium chloride 24431-56-9D, 2-Naphthalenesulfonic acid, 6-methoxy-, reaction product with diphenylaminediazonium sulfate and formaldehyde 29060-60-4D, Benzene, 1,1'-oxybis[(methoxymethyl)-, reaction product with methoxydiphenylaminediazonium sulfate 30525-89-4D, Paraformaldehyde, reaction product with aryl diazonium compds. 32445-22-0D, 1,3-Benzenedimethanol, 4,6-bis(1-methylethyl)-, reaction product with methoxyphenylaminediazonium sulfate 32445-23-1D, 1,5-Naphthalenedimethanol, diacetate, reaction product with dimethyldimethylolbenzene and diphenylaminediazonium sulfate 32449-01-7D, Thiophene, 2,5-bis(ethoxymethyl)-, reaction product with methoxydiphenylaminediazonium phosphate 32449-02-8D, Anthracene, 9,10-bis(methoxymethyl)-, reaction product with diphenylaminediazonium phosphate 32449-03-9D, 1,4-Benzenedimethanol,  $\alpha,\alpha'$ -diphenyl-, reaction product with diphenylaminediazonium sulfate 32449-04-0D, Benzene, 1,3-bis(methoxymethyl)-4,6-bis(1-methylethyl)-, reaction product with dimethoxyphenoxybenzenediazonium chloride 32449-05-1D, Benzene, 1,1'-thiobis[4-(methoxymethyl)-, reaction product with methoxydiphenylaminediazonium sulfate 32449-07-3D, Benzenemethanol, 4,4'-[1,3-propanediylbis(oxy)]bis-, reaction product with formaldehyde and methoxydiphenylaminediazonium sulfate 32449-08-4D, Benzene, 1,1'-methylenebis[4-(methoxymethyl)-, reaction product with formaldehyde and methoxydiphenylaminediazonium sulfate

10/562,361

32449-09-5D, Phenol, 2,6-bis(methoxymethyl)-4-methyl-, reaction product with formaldehyde and methoxydiphenylaminediazonium chloride 36305-05-2D, Benzenediazonium, 2-methoxy-4-(phenylamino)-, sulfate (1:1), reaction product 49732-38-9D, Benzenediazonium, 4-[(4-methoxyphenyl)amino]-, sulfate (1:1), reaction product with dimethylolterephthalamide 58765-06-3D, Benzenediazonium, 4-[(2-carboxyphenyl)amino]-, phosphate (1:1), reaction product with bis(acetoxymethyl)durol 58765-08-5D, Phosphonic acid, [[4-(1,1-dimethylethyl)phenoxy]methyl]-, reaction product with diphenylaminediazonium sulfate and formaldehyde 58765-09-6D, Benzene, 4-methyl-1-(1-methylethyl)-2-phenoxy-, methoxylated, reaction product with formaldehyde and methoxydiphenylaminediazonium sulfate 58765-10-9D, Benzene, 2-bromo-1-methoxy-4-phenoxy-, methoxylated, reaction product with formaldehyde and methoxydiphenylaminediazonium sulfate .

(light-sensitive compns. containing, for diazo copying and printing plates)

=> d his nofile

(FILE 'HOME' ENTERED AT 10:19:46 ON 30 JUN 2008)

FILE 'HCAPLUS' ENTERED AT 10:19:53 ON 30 JUN 2008

L1 1 SEA ABB=ON PLU=ON US20070099130/PN  
SEL RN

FILE 'REGISTRY' ENTERED AT 10:20:05 ON 30 JUN 2008

L2 5 SEA ABB=ON PLU=ON (108-95-2/BI OR 2203-14-7/BI OR  
317804-55-0/BI OR 54845-41-9/BI OR 56272-52-7/BI)  
L3 STR  
L4 STR  
L5 50 SEA SSS SAM L3 AND L4  
L6 STR L3  
L7 29 SEA SSS SAM L6 AND L4  
L8 22 SEA SSS SAM L6  
L9 STR L6  
L10 19 SEA SSS SAM L9  
L11 SCR 1918  
L12 22 SEA SSS SAM L9 NOT L11  
L13 STR L9  
L14 22 SEA SSS SAM L13 NOT L11  
L15 SCR 1992  
L16 25 SEA SSS SAM L13 NOT (L11 OR L15)  
L17 3232 SEA SSS FUL L13 NOT (L11 OR L15)  
L18 3 SEA ABB=ON PLU=ON L17 AND L2  
L19 2 SEA ABB=ON PLU=ON L2 NOT L18  
L20 1 SEA ABB=ON PLU=ON L19 NOT MAN/CI  
L21 STR  
SAV L17 LE361/A  
L22 50 SEA SUB=L17 SSS SAM L21  
L23 813 SEA ABB=ON PLU=ON L17 AND 3/NR  
L24 1044 SEA SUB=L17 SSS FUL L21  
SAV L24 LE361A/A  
L25 424 SEA ABB=ON PLU=ON L24 AND 3/NR  
L26 36 SEA ABB=ON PLU=ON L25 AND 4-HYDROXYPHENYL?/CNS  
L27 388 SEA ABB=ON PLU=ON L25 NOT L26  
L28 100 SEA ABB=ON PLU=ON L25 AND 4-HYDROXY?/CNS  
L29 324 SEA ABB=ON PLU=ON L25 NOT L28  
L30 9433 SEA ABB=ON PLU=ON 108-95-2/CRN  
L31 26 SEA ABB=ON PLU=ON L17 AND L30

FILE 'HCAPLUS' ENTERED AT 11:22:42 ON 30 JUN 2008

L32 186 SEA ABB=ON PLU=ON L28  
L33 715 SEA ABB=ON PLU=ON L29  
L34 66 SEA ABB=ON PLU=ON L32 AND L33  
L35 4775 SEA ABB=ON PLU=ON L17  
L36 35397 SEA ABB=ON PLU=ON L30  
L37 147 SEA ABB=ON PLU=ON L35 AND L36  
L38 0 SEA ABB=ON PLU=ON L37 AND L1  
L39 80249 SEA ABB=ON PLU=ON L20  
L40 306 SEA ABB=ON PLU=ON L35 AND L39  
L41 1 SEA ABB=ON PLU=ON L40 AND L1  
L42 32 SEA ABB=ON PLU=ON L34 AND PHOTOG?/SC,SX  
L43 35 SEA ABB=ON PLU=ON L37 AND PHOTOG?/SC,SX  
L44 41 SEA ABB=ON PLU=ON L40 AND PHOTOG?/SC,SX  
L45 75 SEA ABB=ON PLU=ON L43 OR L44

10/562,361

L46	1	SEA	ABB=ON	PLU=ON	L45 AND L1
L47	1	SEA	ABB=ON	PLU=ON	L45 AND PHENOLIC DEVELOPER?
L48	30	SEA	ABB=ON	PLU=ON	L45 AND (RECORD? OR PRINT?)
L49	2	SEA	ABB=ON	PLU=ON	L42 AND L48
L50	32	SEA	ABB=ON	PLU=ON	L42 OR L49
L51	28	SEA	ABB=ON	PLU=ON	L48 NOT